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No. 1

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Ask our travellers about it or better still, sit right down and send us a MAIL ORDER now. The price is certainly attractive and the guarantee of the oldest house in the world protects you.

SEND US YOUR ORDER

Ash's Canadian Monthly Circular

VOL. II.

TORONTO, OCTOBER 1, 1911

No. 1

Primary Tuberculosis of the Mucous Membrane of the Mouth and the Mandible after Tooth Extraction

By Dr. Med. Th. Montigel.

In No. 3 issue of the D. Med. W.-Schrift for this year, Privat Dozent Dr. G. Ehrhardt, of Königsberg, published an interesting observation in which he described an infection by contact of an instrument with the extraction wound, which if it is not absolutely certain, is, however, extremely probable. This is Dr. Ehrhardt's account of the case:

Girl, nine years of age, coming of a healthy family, had, according to information, always been healthy. Swellings of glands or symptoms of lung affection in particular have never been observed. Three months ago the patient had a curious premolar tooth extracted by a dental surgeon. The extraction wound did not heal, so after a few days the family physician was consulted, and he recommended disinfecting mouth-washes. Notwithstanding this, a thickening of the alveolar process supervened, which corresponded to the extraction wound. When finally a large gland, little sensitive to pressure, in the sub-maxillary region, and a few smaller glands upon the corresponding side of the neck, could be felt, the family physician sent the child to me for diagnosis and treatment. The mother was disposed to assume that the extraction wound had been polluted by unclean instruments, as the operator in question had not sterilized his dental forceps.

The investigation in the case of this child, who looked remarkably strong and healthy, showed no disease of the internal organs. The lungs, especially, were found to be completely normal. Swellings of glands, excepting on the right side of the neck, were nowhere to be found. In the right sub-maxillary region a

thick gland projected, the size of a walnut, which was quite sensitive to pressure. In the same neighborhood soft small glands could be felt; the right mandibular half was thickened in the region of the premolars. This thickening was preponderatingly present at the alveolar process, but it also continued upon the mandible itself. On opening the mouth we saw the second premolar surrounded by a granular seam of about 2 mm. broad. To these granulations, which appeared to grow out of the alveous, the mucous membrane was attached, which possessed a strongly injected edge in the mucous membrane on both sides of the alveolar process. In a circumference of about 2 cm. there were a number of greyish-yellow knobs deposited, which were especially distinctly prominent when one stretched and anaemised the mucous membrane. The alveolar process was thickened to the extent of double its diameter.

After these microscopic findings the diagnosis became very easy: it was a question of primary tuberculosis of the alveolar process and the mucous membrane of the mouth, with secondary tubercular affection of the regionary lymph glands. The affection of the mucous membrane exhibited a type of the cases known as "lupus of the mucous membrane."

The diagnosis indicated a simple way to therapeutic treatment. The indication was to remove the localisations of tuberculosis by means of surgical intervention. In the first place, the glands in the sub-maxillary region were cleared away under anaesthesia: the largest one was already caseous. Then the mucous membrane was excised as far as it was diseased. The second premolar was extracted, and the alveolar process, as far as it was not already rarefied through the tuberculous granulations, was resected with the hollow chisel forceps. The resection had to be extended up to the mandibular-ramus.

The healing was effected, without disturbance, in three weeks. A subsequent investigation a year after showed completely normal conditions in the cicatrices and no further localisations of tuberculosis. The patient must be considered to be healthy.

According to the anamnesis and findings, there cannot be any doubt that the infection of the extraction wound in this case had occurred from without. At the time of the operation there were no tuberculous alterations in the lungs or the glands of the neck (except in the sub-maxillary glands of the affected side) or of the tonsils, nor did such become manifest at the subsequent investigation. The localisation at the gum and alveolar process formed the sole tuberculous hearth.

It is difficult to decide whether the infection arose from the forceps, from the fingers of the operator, or perhaps from tuberculous bacilli which vegetated in the carious milk tooth. As is known, V. Starck Hauszel and Jaruntowski have demonstrated the existence of tuberculous bacilli in carious teeth, and individual authors have endeavored to prove that tuberculosis in the lymph glands of the neck arises from dental caries. To this assumption must be opposed the opinion of Hanau, Kruckmann, and others, who, according to the findings of their sections, consider the tonsils as the port of entrance of tuberculosis to the glands of the neck. This latter view is certainly supported by the statistical fact that the lymphs belonging to the tonsils are affected, by preference, at the maxillary angle, and at the anterior edge of the sterno-cleidomastoid muscle.

I have examined in twenty-nine cases the carious teeth in children with tuberculosis of the lymph glands of the neck, in reference to the presence of tuberculous bacilli. Only in one case did I succeed in demonstrating the existence of acid-proof bacilli in a dental cavity. These bacilli were substantially thicker than Koch's bacilli: they were, in my opinion, the well-known Petri's milk bacilli. Unfortunately, the intra-peritoneal vaccination in guinea-pigs was not successful. All the same, I believe it would be worth the trouble to re-examine V. Starck's findings, on the basis of our extended knowledge, in regard to bacilli which are proof against acids. Until this re-examination is done we may still be permitted to harbor a doubt concerning the infection of carious teeth, and this doubt is the more justifiable because the tuberculous bacilli appear to exercise little resistance against buccal saliva.

I consider in my case, from external evidence, a transmission by means of the dental forceps as probable. That the transmission occurred during the extraction itself is proved by the extensive sympathetic affection of the alveolar process. With the normal quickly healing tooth extraction wound, a possible affection by means of milk containing bacteria, such as was assumed at one time by Westenhoffer in regard to the etiology of tuberculosis of the glands of the neck, can scarcely lead to severe alterations of the bones. Only when the bacilli have really been deeply vaccinated into the tissues does so extensive an osseous affection appear to me to be possible.

In any case, the experience which I have given should be a caution for the careful disinfection of all dental instruments. It is known to us doctors how much people sin in this regard in the field of dentistry, especially quacks.

Two points strike me in this report which I cannot leave without referring to them:—

Firstly, that Privat Dozent Dr. Ehrhardt is not clear in reference to the conceptions “milk tooth” and “premolar.” From the whole report we cannot glean with certainty whether the child had had removed one or two milk molars or one or two permanent premolars. While in the history of the case the doctor speaks of the “premolar” and “second premolar,” in the epicrisis reference is made to the “carious milk tooth,” as if this were one and the same thing. As the patient was just of the age when the milk molars are changed, more exact scientific indications would have been of value.

Secondly, our esteemed colleague leaves us in doubt if, in this sad case, the guilty person was a dental surgeon or a quack. He speaks of a “Zahnheilkundigen” (dental surgeon) and in the final sentences he expresses his distrust especially of the quacks. Why not give the operator a descriptive name instead of casting a doubt on qualified and unqualified alike? A little more science on the medical side is as desirable as on the dental side.

ORAL MASSAGE AND HYGIENE

By Dr. Edgar Neumann, of Vienna.

“Running water frees itself from impurities to a great extent, and impeded circulation may well be likened to a running stream. A rapid flow, whether in a blood-vessel lymphatic, or river, prevents the deposit of particles held in suspension.”—Douglas Graham, in *Treatise on Massage*.

Oral massage has received but little attention from the dental profession, notwithstanding its availability in diseased conditions of the oral cavity.

Generally speaking, the technique of massage is as follows:—

SMOOTHING, superficial or deep KNEADING, RUBBING, STROKING, and VIBRATION.

In SMOOTHING with the balls of the fingers, a mechanical irritation is exercised on the terminal nerve-fibres which promotes hyperaemia and stimulates the sluggish peripheral circulation.

KNEADING caused a more rapid elimination of waste products.

RUBBING promotes disgregation of pathological products, the particles of which are driven into the neighboring lymphatics.

STROKING provokes congestion of the tissues and lessens the irritability of the sensitive nerves.

VIBRATION stimulates both the muscular activity and the blood pressure.

While, as a general rule, appliances and instruments for massaging should be rejected, vibration is better performed with an apparatus by means of which vibratory massage can be both more regularly and rapidly performed than with the hand.

The ills resulting from neglect of oral cleansing or from pathological conditions of the mouth are relieved by massage with the finger or tooth-brush, and the salient feature in Dr. D. D. Smith's procedure of caring for the teeth, described in a paper read before the Annapolis Dental Society, May 3rd, 1909, is that he practically massages the teeth and gums.

Following the above suggestions, C. Ash & Sons have constructed a Vibratory Massage Apparatus for dental purposes which can be attached to the engine-arm exactly in the same way as handpieces and angle attachments.

The apparatus is constructed according to the principles of centrifugal vibrations. It consists of the Vibrator and of two attachments, one for use on the maxilla and the other for use on the mandible.

The Masso-Vibrator permits of the regulation of both the frequency and the intensity of the vibrations and also of the contact of the attachments with the gums. In order to regulate the strength of the vibrations, the nut of the upper part should be screwed up, the index displaced, and the nut again tightened. The attachment has two prongs, which hold cotton-wool; in dealing with sensitive patients, cotton-wool is often of great service.

In incipient abscessed conditions, in alveolar atrophy, or in cases of sluggish circulation, such as in congested and infected conditions of the gums and soft tissues, in pyorrhea, pockets, etc., massage is of the greatest importance in stimulating the functional activity of veins and of lymphatics.

In pyorrhoea alveolis I have obtained striking results. In these cases massage serves an excellent purpose in that it tends to evacuate the pus. In detail my method consists of directing the force of massage from the extremity of the pocket towards its gingival opening and of careful removal of concretions and calcareous deposits to be followed by thorough washing-out of the pockets with a 5 per cent. solution of hydrogen dioxide. Maintained for about a month, especially in the beginning, this treatment arrests the discharge of pus, and ultimately all inflammation. In every instance massage stimulates the circulation and thus benefits the condition of the gums.

In a case of pyorrhoea alveolaris the gum of the patient, a woman of about forty years of age, was in a bad condition, especially around the right lower canine, from which pus had been oozing for a long time, as the patient expressed it. After removal of tartar the patient was subjected to vibratory massage. The tooth and the gum soon began to improve; the tooth became firm in its socket, the gum lost its dark purple color, and the cervical gingival contour regained its normal condition.

Vibratory massage may be used to advantage after hypodermic injections to cause the more thorough diffusion of the anaesthetic fluid. It is also useful for hastening the eruption of permanent teeth.

SUMMARY.

Vibratory massage, if intelligently employed, is of inestimable value in various diseased conditions of the gums. It acts as a positive tonic to weakened tissues in reducing irritation and soreness. Ash's Masso-Vibrator possesses several qualities which mark it as especially useful: it is cheap, simple to operate, and reliable, and I am extremely satisfied with it.

Our Model Operating Room

Will give you some fine ideas in office equipment and decoration. If you are in Toronto it will pay you to call and inspect the best Model Room in Canada.

Second-Hand Goods

1 Harvard Oil Chair, good condition.....	\$75 00
1 Columbia Chair, Maroon Plush, in excellent working order. This Chair is still in Maritime Provinces....	\$70 00
1 Ritter Cable Engine, 110 Volts, Direct Current, Fair Condition.....	35 00
1 Davis Gasometer, less Face Piece and Tubing, Excellent Condition.....	18 00
1 Pelton No. 1 Furnace with Pyrometer, A 1 Condition	65 00
1 Cabinet, No. 57, American Cabinet Co's, in A 1 Condition.....	65 00
1 Ritter all Cord Wall Type Engine, for 110 Volts Direct Current. Perfect condition.....	70 00

WE INVITE SPECIAL DEPOSIT ACCOUNTS.

A cash deposit of \$100.00 to apply to general merchandise, entitles the sender to a discount of \$11.11.

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Why not send us a deposit NOW.

We have a number of excellent Practices for sale.—Also situations for graduate assistants and laboratory men.

DENTAL PRACTICE FOR SALE—In Saskatchewan, city of 10,000, business averaging \$250.00 per month. Equipment includes running water, electricity, Dunn light, gas outfit, latest cabinet, elgin casting machine and mechanical outfit. Ill health. \$1500 Term \$1000 cash, balance 6 and 12 months without interest. Apply Claudius Ash, Sons & Co., Limited, Toronto, Ont.

AT ONCE—Assistant in up-to-date Office near to Toronto. Good salary. Apply Claudius Ash, Sons & Co., Limited, Toronto, Ont.

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UNAPPROACHED FOR

**Excellency, Purity, Strength, Elasticity
and Density.**

To mark the genuineness of our Rubbers, the face of every box and envelope which we supply bears this signature and monogram—



and one of the pieces of cloth in which each sheet of rubber is packed bears this signature—



in addition to the name of the Rubber.

Always ask for ASH'S when ordering Dental Rubbers.

For full list of our Dental Rubbers showing NEW and REDUCED prices, see next page.

IMPORTANT.

We have drawn the attention of the profession for months past to the fact that we give full **16 OUNCES** of Rubber TO THE POUND, exclusive of the linen backing. We have also stated that MOST American manufacturers DO NOT give 16 ounces to the pound. We now state that consequent to the agitation in America, demanding full weight and measure, these manufacturers to protect themselves from the law are omitting to mark the weight of rubber on their containers. Is our claim proven?

Ash's Dental Rubbers

From September the following prices will apply on our Dental Rubbers.

NOTE.—Our Rubbers weigh 16 ozs. to the pound, exclusive of linen backing and box.

FOR COATING.

	Per lb.	5-lb. lots	10-lb. lots	20-lb. lots
New Pink, Medium.....	\$6.00	\$5.40	\$5.00	\$4.75
No. 1X Pink, Medium.....				
No. 1 Pink, Light.....				
Gum Pink, Medium.....				
Gum Pink, Light.....	5.00	4.50	4.25	4.00
No. 2X Pink, Medium.....				
English Pink, Medium.....				
English Pink, Light.....				

FOR BASE

Improved Black.....	4.25	3.80
Combination		
White for Side Blocks, etc.....		
Child's "G"		
A. E. Elastic, Dark Brown	3.75	3.35
W Elastic, Dark Brown.....		
Whalebone No. 1, Dark Brown.....		
Whalebone No. 2, Light Brown.....		
Solid Base	3.30	2.97
Dark Red.....		
Flexible Base.....		
Dark Elastic.....		
Maroon.....	2.75	2.45
Red.....		
Orange.....		
Dark Brown.....		
Brown		
English Base.....		

SPECIAL—FOR TENDER GUMS, ETC.

	Degrees Fahrenheit	Time H. M.	lb.
Soft Pink, for lining Palates.....	310	1 15	\$6.00
Soft Dark Red.....	310	1 15	4 25
Vela for Artificial Palates	270	6 0	6.00
Brown Weighted.....			4.25
Pink Weighted.....			6 00
Brown Repairing.....			4.75
Pink Repairing.....			6.00

NOTE.—Cash Discounts do not apply on quantity rates on our Coating Rubbers in any quantity over 5 lbs.

Stent's Composition

Attempts have been made to imitate Stent's Compound; even the color of the Container, and the label have been copied, for the purpose of deceiving the unwary. Every cake of the **Original Genuine** Stent's Composition bears the Trade Mark, which consists of the single word

STENT'S

Without Initials of any kind and the outlines of two **Impression Trays**, also the label on every box bears this signature:

C. A. & A. Stent.

Sole owners of the original formula—

CLAUDIUS ASH, SONS & CO., Limited

Note the Canadian price:

50 Cents per Box

10 Lbs. for \$9.00

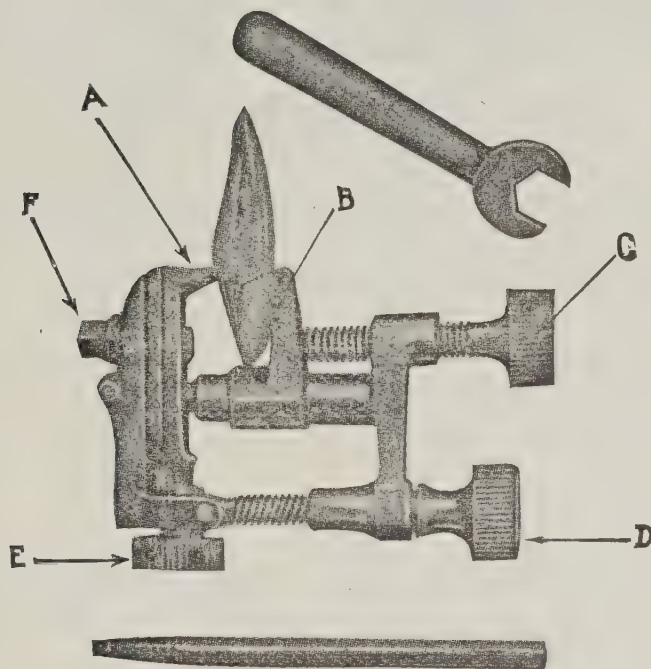
Ask for a Sample Cake.

Free for the Asking.

Mosley Crown Remover

An Ideal Appliance for Removing
Crowns from Roots

Registered.



Natural Size.

The Mosley Crown Remover is the only instrument yet devised for removing Dowel Crowns from the mouth. Its primary object is to remove these crowns without in any way injuring the root. This is accomplished quickly and painlessly. In most cases the crown remains uninjured and can be used again if desirable.

A slight turn to the right of Thumb Screw E removes the Crown, one Wedge Tongue pulling the Crown downwards, the remaining two supporting the root

- | | |
|--------------------|----------------|
| A. Wedge Tongues 3 | D. Thumb Screw |
| B. Vice Jaw | E. Thumb Screw |
| C. Thumb Screw | F. Jam Nut |

Complete directions with each Remover.

PRICE - - \$5.50

A Popular Priced Wax

IS IN GREAT DEMAND

The large sale for our ENGLISH WAXES bears testimony to their great value.

No. 3, Pink	per lb.	.65
“ 2, “	“	.80
“ 1, “	“	.90
Brown for Base	“	.85
Extra Tough Pink	“	1.00
“ “ “	“	1.25
“ “ Yellow.....	“	1.00
Black for Inlays in fine sticks, per box		.35

Send us that MAIL ORDER, or ask one of our many travellers to supply you.

MOUTH MIRRORS



Since advertising our CONE SOCKET MIRRORS at 25 cents each in previous issues, we have sold many hundreds of them.

We want to attract your attention also to our

METAL HANDLE MIRRORS

30 CENTS EACH

We have a fine stock of these and can supply them either PLAIN or MAGNIFYING in the various sizes.

A request postal will promptly bring one to you

Globe Regulating Appliances

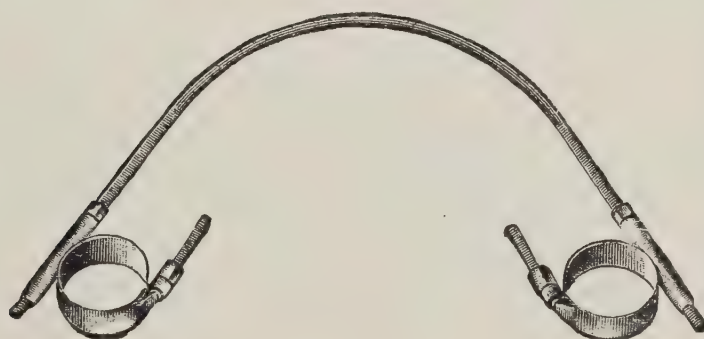
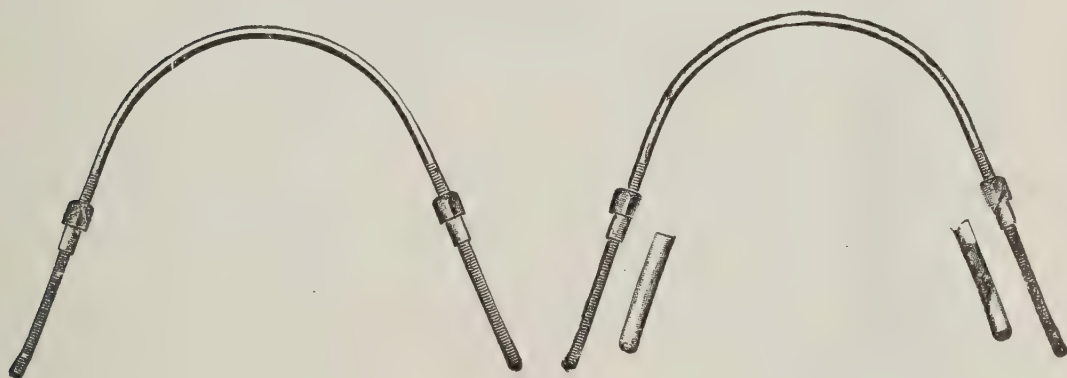
The various parts of the Globe Appliances are made of reliable and suitable alloys, heavily gilt, and are considered exceptionally high class by the most eminent orthodontists. The quality, patterns and prices appeal to all practitioners who will also find it less expensive to employ them than to make similar appliances themselves.

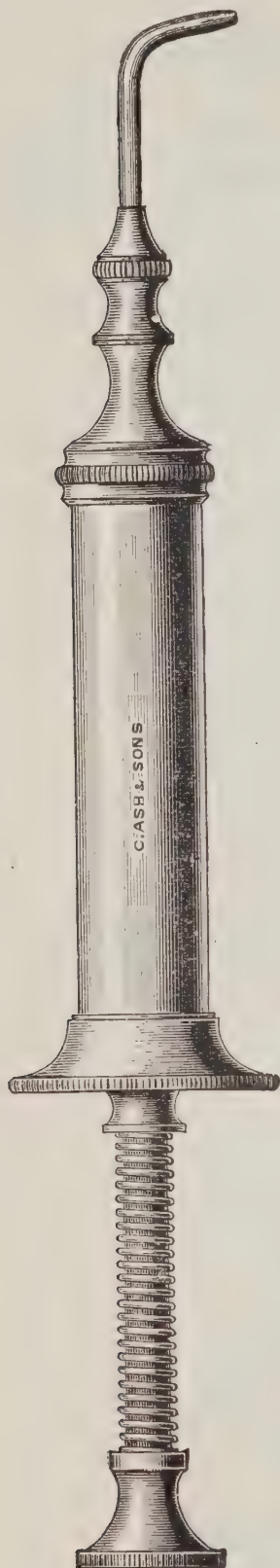
No. 1. Molar Band.	\$ 80
No. 2. Bicuspид Band.	80
No. 3. Molar Band with tube.....	85
No. 4. Bicuspид Band with tube.....	85
No. 5. Expansion Arch with nuts.....	1 00
No. 6. Expansion Arch with nuts and tubes.....	1 15
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Globe Regulating Wire, two gauges, per box.....	30
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Note.—The No. 5 Arch can be supplied ribbed as well as plain.

Illustrations opposite page.

Globe Regulating Appliances





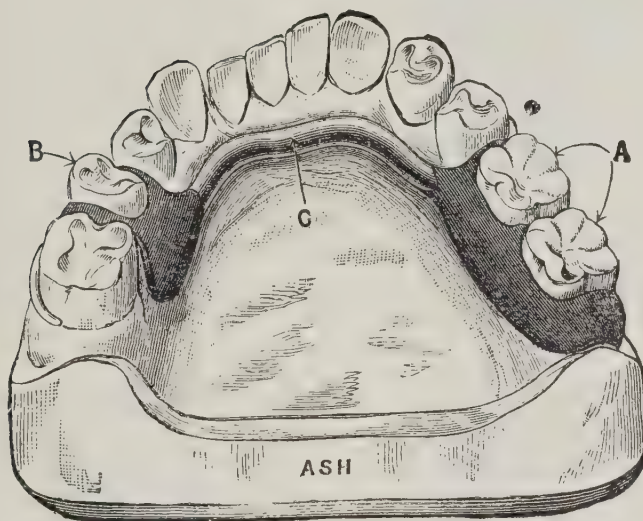
Hunt Syringe

Price	-	-	-	-	-	\$1.85
Price, with 1 Extra Fine Point						2.35

This Syringe has always been the best Water Syringe on the market. It has never been successfully imitated.

Its first cost is its last cost.

ASH'S OVAL GOLD CASED WIRE For Bar Lowers



Bar Lower Dentures have come into universal demand. Note some of their advantages.

No tendency to push teeth outwards.

Greater cleanliness.

Less bulk.

Greater rigidity.

Per dwt. \$.40

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**The Nearest Approach to Nature's Enamel
Known to Dental Science**

The illustrations shown on the next page are examples of work done by Dr. A. McAlpin of Bradford, P.A.

There is no other Silicate Cement that can be employed to do restoration work that can be compared to Schoenbeck. This Cement has recently been savagely attacked by the manufacturers of other cements. Schoenbeck's cement makers are grateful for this gratuitous advertising which like every other **"knock" is a "boost."**

The sales are increasing and the satisfied customers are daily becoming more numerous.

This Cement has gained and maintains the foremost position of all Cement fillings.

SUPPLIED IN THE FOLLOWING SHADES

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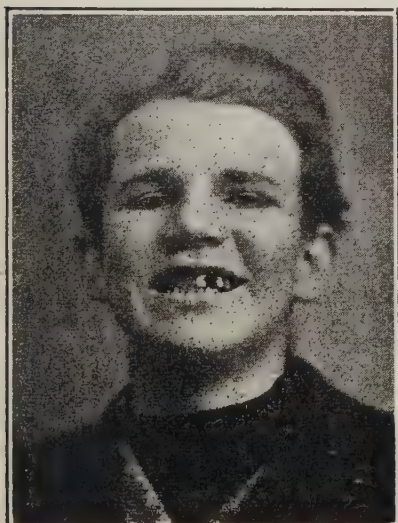
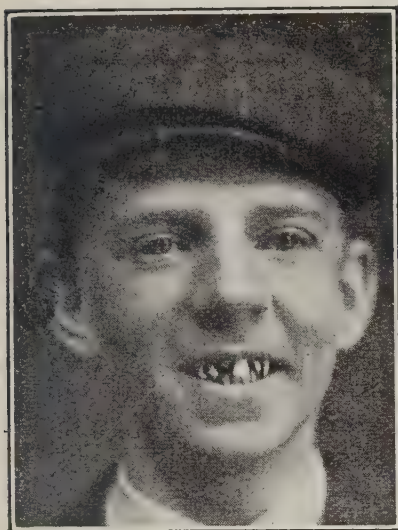
PRICES

1 Color, Small	 \$1.50	1 Color, Large	 \$3.00
4 Color Packet	 5.50	6 Color, Packet	 8.00
1 Small Powder	 1.00	1 Small Liquid	50
1 Large Powder	 2.00	1 Large Liquid	 1.00

Pure Cocoa Butter.....Per Tube .20

Schoenbeck's Special Varnish.....Per Bottle .35

Reproduction of Restorations made by DR. A. McALPIN,
Bradford, Pa., with "SCHOENBECK CEMENT."





You Need A New Agate Spatula

The Agate Spatula is the most important aid to successful manipulation of all Silicate Cements.

Ash's Agate Instruments have always been the best in the market.

**Double End Agate Plastic
Instrument - - \$1.10**

Single End Agate Spatula - .70

**Double End Agate Spatula with
double Head Burnisher - \$1.50**

INDISPENSABLE FOR WORKING SILICATE CEMENT

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What You Have So Often Asked For.

**A POPULAR TEMPORARY STOPPING
30 Cents a Box.**

It's a good guttapercha, scientifically prepared, and
it will please you as it has satisfied
many others.

**WE MAKE A QUANTITY RATE OF
6 BOXES FOR \$1.50**

SEND US AN ORDER NOW

Ash's Popular Stopping

This Stopping has been recently improved and is
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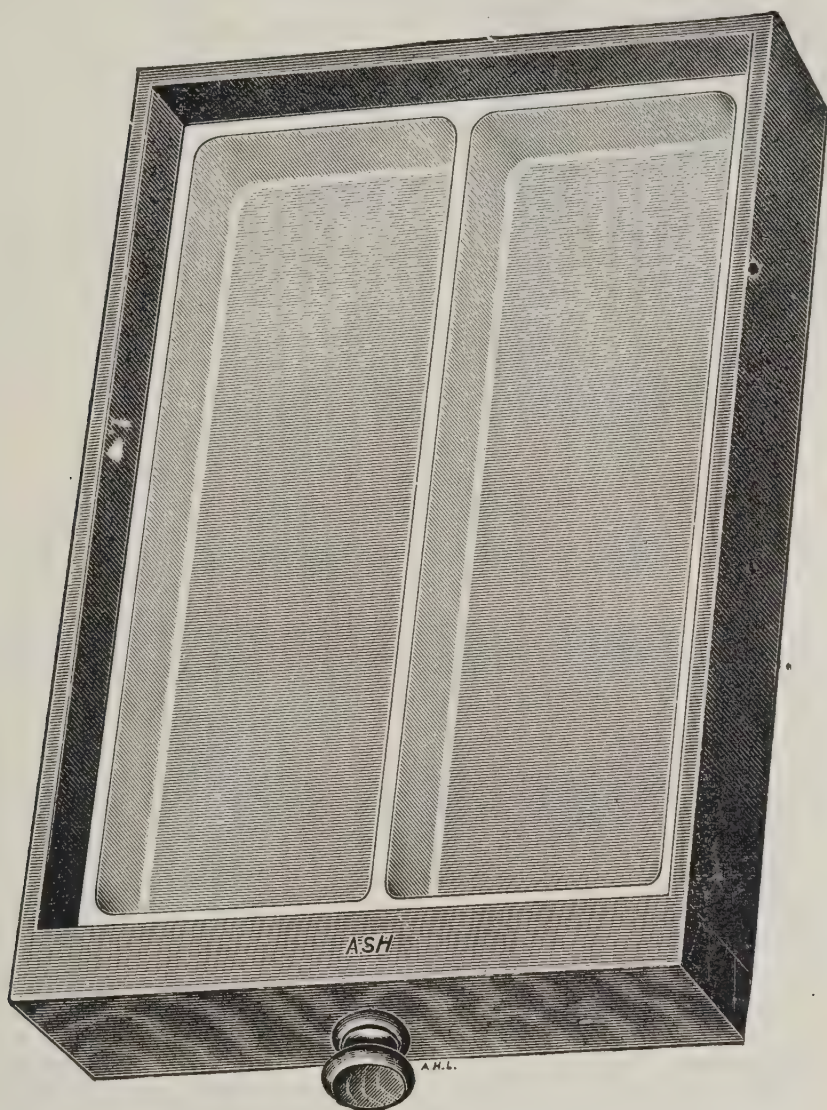
Send us a request Postal Order.

PORCELAIN TRAYS

Porcelain Trays, each 10 Cents



Drawer of Alan Table with six large and three small Porcelain Trays—
about half size.

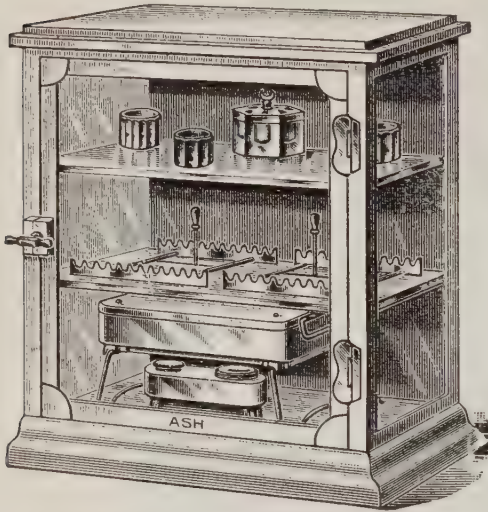
PORCELAIN TRAYDIVIDED DOWN THE MIDDLE. FOR LONG-HANDLED
INSTRUMENTS

The two small sizes of Porcelain Trays for small instruments and useful sundries have been so favorably received by the Profession that we have decided to add the size here illustrated to our stock for long-handled instruments.

It is made to fit the drawer of Allan's Bracket Table, the outside dimensions being $7\frac{3}{4}$ in. long by $4\frac{3}{4}$ in. wide by $\frac{3}{4}$ in. deep, but it can be lifted out of the drawer if desired and used in any situation most convenient to the operator.

It is perfectly aseptic, and practically equal to new each time it is cleaned.

Price..... each 35c



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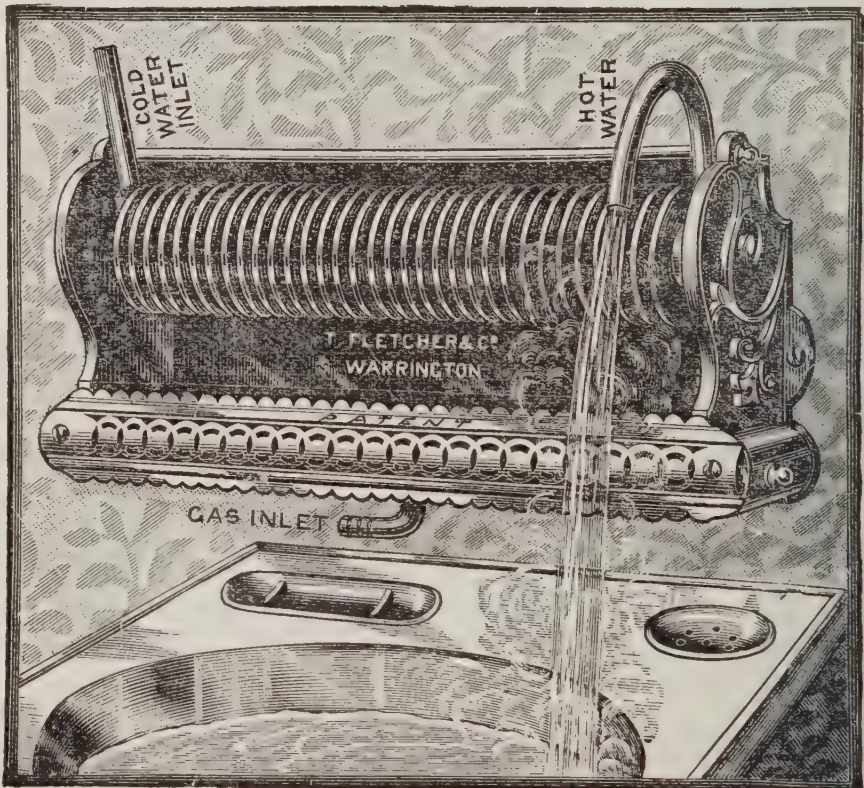
With Metal Back and Metal Frame
Enamelled White ; Glass Front
and Sides and two Plate Glass
Shelves.

Dimensions : 17 in. high, 12 in. wide,
8 in. deep.

From these measurements it will be seen
that this Cabinet is a convenient size for
standing on a mantelpiece, an ordinary
shelf, or a table. It is of British manu-
facture, strongly made, and well finished.
It will hold a good number of instruments
and sundries.

Price, empty - - - - \$12.00
With word "Sterilizer" in gold - 13.00

INSTANTANEOUS WATER HEATER



Gives a steady stream of nearly boiling water. A $\frac{3}{8}$ -inch clear
bore gas supply is sufficient for the heater.

Price - - \$11.50 | Price, N.P. - - \$14 00

GALLOWAY'S

SUCTION DEVICE

FOR LOWER DENTURES ONLY

Patented in United Kingdom and U.S.

Other Patents Pending

This Suction is the most satisfactory ever offered. It consists of a curved metal bar, which has counter sunk holes in it for four pins to secure it to a plaster model, and a vulcanized strip of Ash's specially prepared Vela Rubber which so well withstands the oral fluids.

This Rubber Strip is held in position in the denture by the suction which is produced by the small holes on the curved surface and to the gum by the suction through the larger holes on the flat surface. The Strip can be removed and cleansed, and replaced in half a minute.

The device is cleanly and secures the denture properly without any discomfort to the patient.

Price \$1.00

Sole Agents—

Claudius Ash, Sons and Co., Limited

BORITH

An excellent preparation to recommend your patients for cleansing Dentures. It is a thoroughly reliable preparation.

Price \$2.00 doz.

ZIMO

The best obtundent on the market for the painless extraction of teeth and minor surgery; Antiseptic and Germicidal. Can be used in all cases; safe and effectual. No bad after effects; Once used, always used. "ZIMO is a great practice builder," as everyone says who has used it. 4 oz. bottle, **\$1.00**; 6 bottles, **\$5.00** Every bottle guaranteed. Try a bottle; if not all right send it back and get your money.

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The new Telephone Number is North 5776, and Phone calls as well as Mail Orders will receive the best attention.

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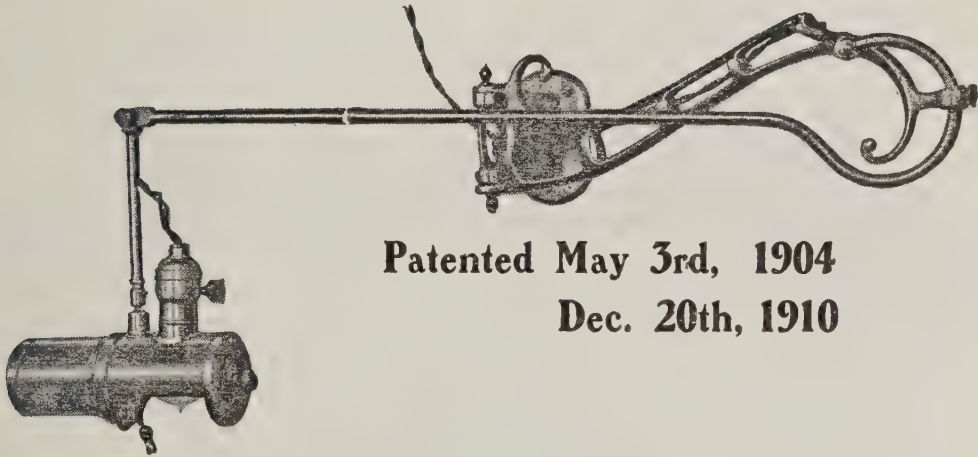
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Patented May 3rd, 1904
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The Lewis Illuminator stands alone in several important features, one of which is the shutter which enables the operator to control a circle of light of four diameters ranging from two to six inches. This is quickly and easily attained by moving the small handle projecting from below to either right or left to a stop.

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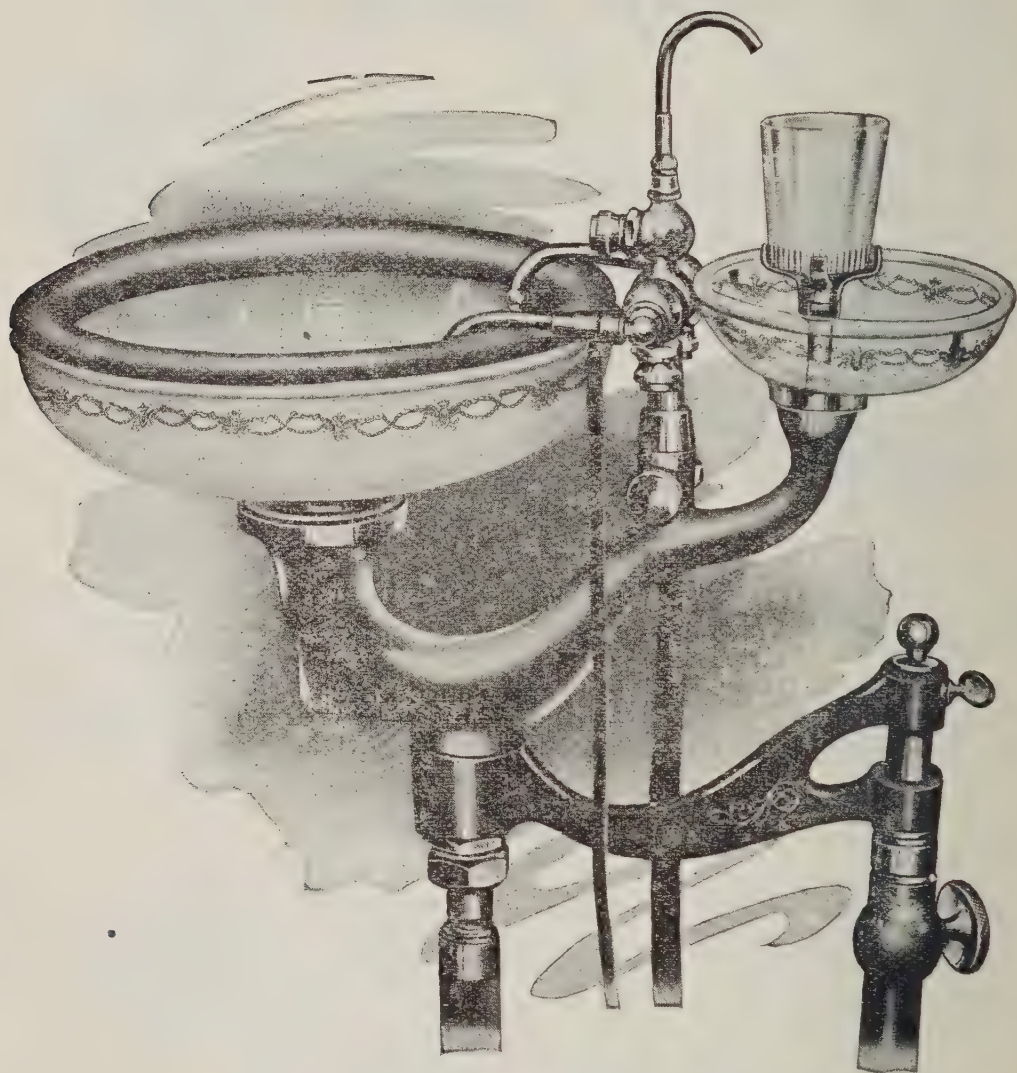
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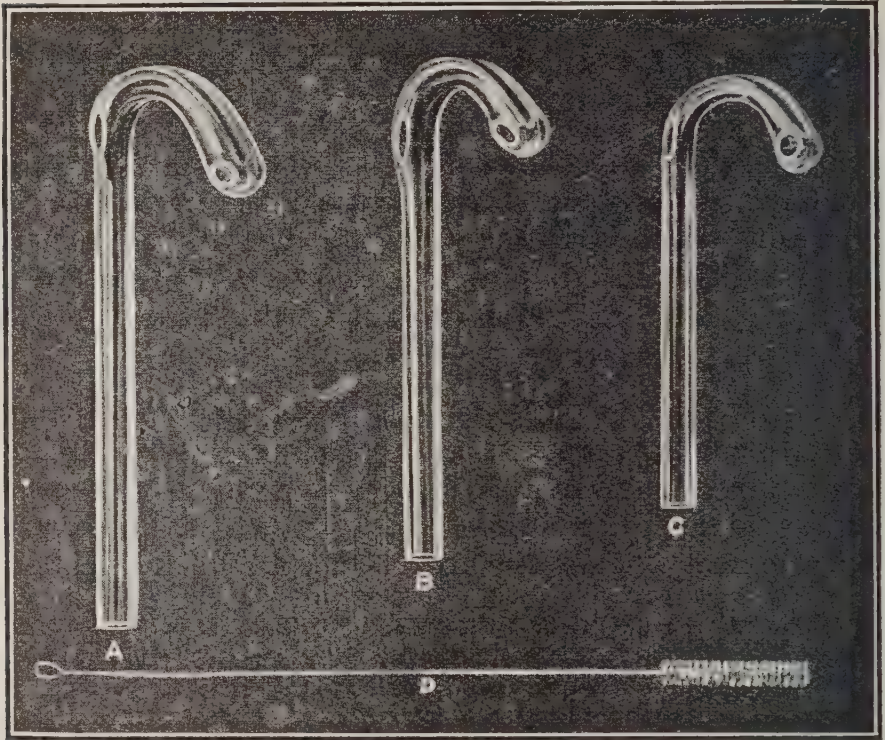
Pyorrhocide used as a dentifrice thoroughly cleans the teeth and maintains mouth health; a clean healthy mouth rather than one disguised by flavor or perfume.

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Simple, Effective and Strong



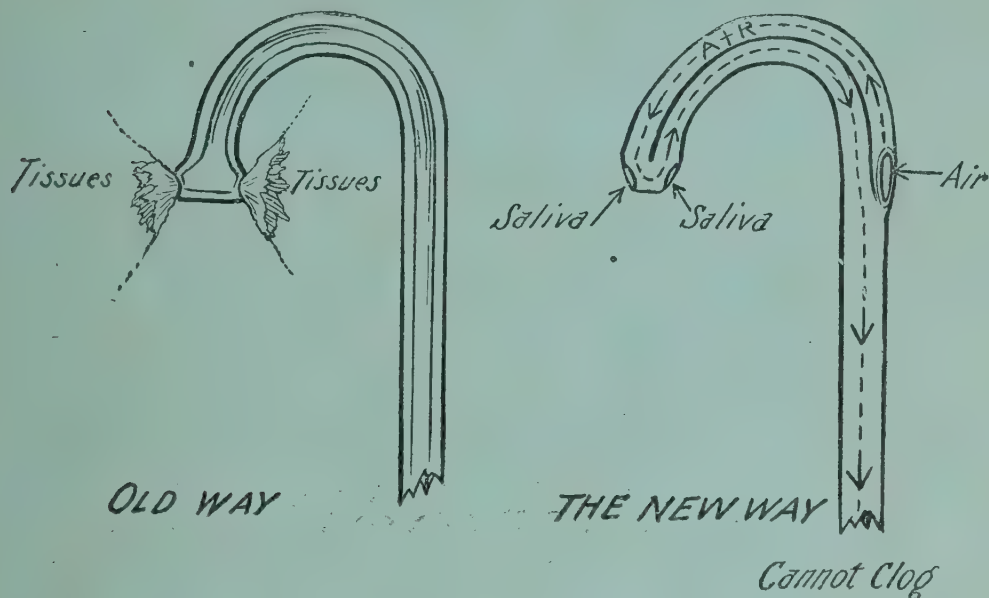
This Ejector overcomes the drawing-in of the soft tissues of the mouth, so disagreeable to the patient and annoying to the operator.

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The large holes permit the use of the cleaning brush, and the inside of the tube can be easily and thoroughly cleansed and made antiseptic.

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TWENTY DOLLARS

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NINETEEN DOLLARS.

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ASH'S Canadian Monthly Circular

Issued from Toronto on the First of each Month

VOL. II.

NOVEMBER, 1911

No. 2

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Claudius Ash, Sons & Co., Limited

Ash's Canadian Monthly Circular

VOL. II.

TORONTO, NOVEMBER 1, 1911

No. 2

THE EMPLOYMENT OF SUCTION CHAMBERS WITH PARTICULAR REGARD TO THE SUCTION BRIDGE.

BY C. RAUHE, OF DUSSELDORF.

Six years have elapsed since we introduced into our practice the suction arrangement which I propose to show you to-day, and I can assure you that it fulfils all demands which are made upon it. As is well known, rubber suction discs have been in use for about thirty years, but, in common with many other colleagues, I have never been able to make use of them, because the disadvantages associated with them considerably outweigh the advantages. In addition to the necessary renewal of the rubber disc, these old suction devices also possess this defect: it is not possible to fit them accurately to all palatine conditions, and it is needful to produce a more or less markedly curved saucer shape by arbitrarily tightening the rubber disc with a rivet or screw. This causes extreme irritation to the mucous membrane, and yet it does not result in the denture becoming attached to the palate. It is true that the denture is retained by the disc, but it is suspended to the extent of about one-fifth of a millimetre from the palate of the wearer, and the rocking teeth become a laughing-stock to such rude persons as may observe them.

Now, if the palate possesses such strong powers of suction that the denture adheres to the palate, notwithstanding the opposing pressure of the suction chamber, the compressed suction disc exercises such a powerful pressure upon the mucous membrane that severe inflammation of the mucous membrane and subsequent necrosis must be expected.

When I endeavoured to construct a suction device free from these defects, about eight years ago, it became clear to me that this could only be accomplished by means of a suction form which

by simple attachment and vulcanizing-in should automatically bring the rubber disc in its correct position on the palate, and overcome all disagreeable irritation of the mucous membrane on the one hand, and hold the denture firmly attached to the palate on the other hand.

After many experiments (during the course of two years I personally wore about twenty plates which were fitted with various kinds of suction discs) I introduced, about six years ago, the new suction form which is now in the dental market, and it has given universal satisfaction.

By using this new suction form a projection with a gold disc is produced on the denture exactly two-tenths of a millimetre from the palate. The neck of the disc is constructed in such a manner that the India-rubber disc when stretched over it becomes curved just to such an extent that the edge reaches the palate, and when the patient exercises suction the denture is tightly drawn to the palate. The mucous membrane after a short while fills up the hollow space between the disc and the palate, but, by this slight alteration of about two-tenths of a millimetre, the mucous membrane is not at all irritated, and retains in every way its normal healthy appearance. Further, the rubber disc does not irritate the palate, as it only just reaches the mucous membrane, it does not exercise powerful pressure such as is the case with the old forms of suction discs.

It is a generally accepted view that the irritation, with subsequent inflammation and necrosis of the mucous membrane, where rubber suction discs are employed, is caused by the suction power itself. This, however, is an erroneous view as proved by hundreds of cases in which the suction arrangement, with the aid of my suction form, was attached so exactly that the rubber disc was unable to exercise any direct self-pressure upon the mucous membrane, and there was not the slightest sign of irritation of the palate. A rubber disc, however, which is pressed into the shape of a saucer frequently produces, by direct pressure, holes in the palate of the size of a hazel nut.

Practitioners are especially warned against imperfect imitations of my suction forms. Such imitations possess the defect of the old suction devices, and their character can be easily recognized by the fact that the rubber disc either does not assume the form necessary for suction or becomes too markedly curved. Sometimes vulcanized India-rubber discs in the shape of a saucer or plate are supplied with these suction arrangements. These must be condemned without hesitation, as I have already stated in a previous

paper; so also must the rubber disc with projecting rim. I would likewise warn colleagues against the use of red rubber discs, as red rubber easily irritates the mucous membrane. The rubber discs for use, supplied by the firm of C. Rauhe, are always uniform in thickness. This exact uniformity of thickness is absolutely necessary to ensure correct formation of the disc and perfect suction. For this reason no other rubber discs than those supplied by the firm of C. Rauhe should be employed for Rauhe's suction arrangement

With a rubber disc perfectly attached, irritation will only arise when the rubber has become enlarged through swelling and overlaps the chamber in the denture; the irritation is caused by the rim of the rubber pressing against the palate.

Hence it is of the greatest importance to draw the attention of the patient to the necessity of changing the rubber disc, when it gives indications of extending beyond the depression in the denture. The changing of the discs in my suction arrangement can be easily accomplished by the patient himself; all that he has to do is simply to stretch it over the projecting knob.

When employing my suction chamber former it is best to take a plaster of Paris impression, as the full value of the suction disc can only be secured in cases in which the denture is an exact fit. The suction arrangement is not a *ponsasinorum* for badly-fitting dentures due to bad impressions. When we have an impression with Stents composition we are able to construct upon the model produced from it a suction pattern of Stents, which is painted over with thinly mixed plaster, and with this pattern a plaster impression can be taken. This method is not disagreeable for the patient.

The opponents of suction arrangements—and I was one of them during the first thirty-two years of my practice—say that a well-constructed artificial denture even without a suction device is held up securely; I maintain, on the contrary, that a well-constructed denture with suction device is held in position more safely, and for this reason I employ it now. If we exercise slight pressure on the posterior side of the incisors, in the direction of the lip, upon a firmly fitting suction plate without suction device, the plate will be tilted; that is to say, in biting, or when smoking a pipe or cigar, the denture easily becomes loose. This trouble, however, we do not encounter when we employ a rubber suction disc. Attempts have been made by means of articulation (by securing powerful occlusion upon the molars, making provision for three points of contact, etc.) to prevent the tilting of artificial dentures, and there are practitioners who, relying upon their method of

articulation, declare the suction device to be superfluous. As long as man consumes food thicker than writing paper an artificial denture will easily become loose during biting, or by a similar exercise of force, even with the most complex methods of articulation, unless the denture is provided with a rubber suction disc.

The suction arrangement also renders excellent service in partial dentures, inasmuch as it does away with the need of bands, and the parts which lie against the natural teeth can be filled out as sharp as a knife, because the suction arrangement enables us to dispense with wedging. Every colleague who knows of the disagreeable action of bands and of rubber edges which press against the teeth will gladly employ the suction disc, in order to preserve the teeth of his patients from soft, sensitive necks and from caries.

For a period of four years I have constructed, with the aid of the suction chamber, complete and partial suction dentures without a real palatal plate—so-called suction bridges. The teeth are fixed in rubber, and I only put narrow rubber strips, strengthened by gold wire, in the centre of the palate according to the number of the teeth—one, two, or three strips; these strips run towards the palate from the artificial teeth and bear the knob of gold and the knob of gold bears the rubber disc. Dentures of this kind possess the advantage of leaving the greatest portion of the palate free, and are found to be far more pleasant by the patient than full plates which cover the entire palate, inasmuch as they do not impede speech or interfere with taste. Only a few days ago an old lady patient called to thank me because she is now again able to taste everything—a pleasure of which she had been deprived for twelve years. I had constructed for her, in lieu of her old full denture with fourteen teeth, a piece in which the entire palate was left free. There was a ridge of rubber upon the alveolar edge of this case which held the teeth, and a small rubber strip ran from the centre of the incisors in the direction of the posterior portion of the palate, which carried the rubber suction disc.

In regard to this suction bridge Professor Dr. Jung, of Berlin, writes as follows:—

“Mr. C. Rauhe, of Dusseldorf, has recently given us an interesting demonstration.

After demonstrating his construction of a palatine plate with his rubber press, he showed us a number of dentures such as he has been constructing for years, and which he has designated suction bridges—a cross between a plate and a bridge, such as is exemplified in Figs. 1 and 2.

In Fig. 1, a plate with rubber suction disc bears a central incisor whereby the anterior portion of the palate, excepting the narrow connecting strip, is left entirely free, and it does not laterally reach up to the teeth, so that we avoid sensitiveness at the necks of the teeth which might be caused by the action of acids on the food remnants collected there.

Fig. 2 shows a denture which is composed of three saddles connected with each other. These saddles bear the artificial teeth, and are held by a transverse strip which is provided with suction disc. The remarkable thing in both dentures is that the suction disc develops complete and sufficient action, although the rubber discs do not lie in a real suction arrangement. Ordinarily we are accus-

FIG. 1

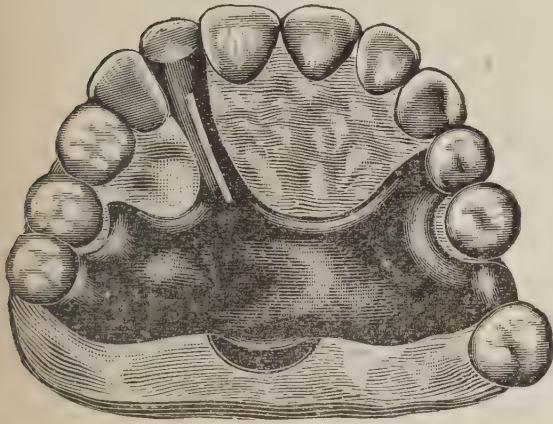
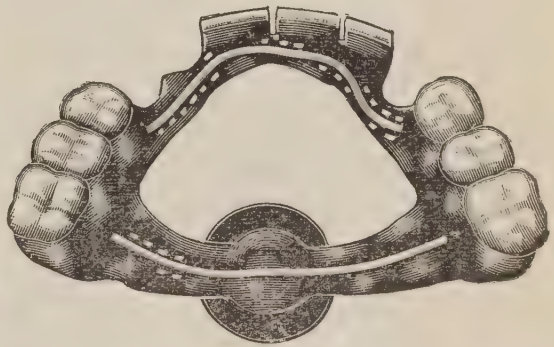


FIG 2



tomed to consider the hollow chamber as the effective agent and the rubber disc only as a supporter of the suction power and as a means of preventing the embedment of the mucous membrane.

A denture which Mr. Rauhe himself has worn for years bears witness to the effective suction power of such edgeless dentures, as one might call them. It consists of a gold plate with artificial bicuspid right and left, and the front teeth standing. This is the most difficult case in the construction of a denture when short tooth crowns do not allow the attachment of bands, for the base of the plate serves as a transverse strip (see Fig. 3A), which is likewise provided with two rubber suction discs situated side by side. Notwithstanding a very unyielding mucous membrane and hard palate, the suction denture can scarcely be loosened from the palate by pulling down on one side, while at the same time there is no redness or hypertrophy of the parts to be observed over the suction discs.

It would appear, therefore, as if the suction discs, lying free laterally, exercised little irritation upon the mucous membrane."

FIG. 3



Even if the attachment of a suction disc is simple, it nevertheless requires some practice in order to discover the most favourable position for it in any particular case. We must always look for a

FIG. 3A



spot as flat as possible, so that the rubber disc, as far as practicable, will lie on a plane surface. If the palate is markedly arched we

take a small chamber pattern, or we may take two and attach them laterally side by side; it is recommended, however, wherever possible, to arrange the position in such a way that the masticatory pressure runs perpendicularly to the rubber disc.

Attention must be drawn to the fact that in some plates the suction disc does not exercise its full power immediately, but only after it has been worn a few hours. In such cases we must not lose courage, for I have never seen cases in which the suction disc did not finally act.

In conclusion, I express the hope that numerous colleagues will be induced by my remarks to test my experience by the employment of the suction disc: I am convinced that thereby many a colleague, from being a Saul, will become a Paul, and will no longer be able to dispense with the rubber suction disc in practice.

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Flat Teeth	"	.26
Diatoric Teeth	"	.04
Combination Sets of 14.....		1.52
Combination Sets of 28.....		3.04
Tube Teeth without Platinum Lining.....	"	.12
Detached Post Crowns.....	"	.12
" "	per 100	10.00
" "	per 500	47.50
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Quantity rates from Teeth prices above (excepting crowns) have been established as follows :

On lots of not less than	27.78	10 per cent.	Discount.
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Rauhe's Improved Suction Disc for Vulcanite Dentures.

PATENTED IN ENGLAND, GERMANY, FRANCE, AUSTRIA-HUNGARY, BELGIUM,
THE UNITED STATES, ETC.

Rauhe's Suction Disc has been specially designed to prevent injury to the palate. It does not draw down the tissues and produce soreness in the mouth. In this respect it is greatly superior to all existing Suction Discs.

There are no parts about it which can be lost or misplaced, such as bolts, or screws, etc.



It is easily kept clean, owing to the fact that the rubber disc can be removed and replaced in a few seconds, without the use of a tool of any kind.

The anchorage of the rubber disc is so simple that the patient can renew the disc when necessary.

The suction power of the disc is sufficient to hold a denture quite firmly and securely in position.

It is unnecessary to add clasps to partial sets which are fitted with Rauhe's Suction Disc.

DIRECTIONS FOR USE:

Press the disc on the most suitable part of the plaster of Paris model with the thumb, fasten it in position with the three small pins which are supplied with it, being careful to drive the heads right home, and pack the hole in the centre with dental rubber. After the case is packed and vulcanized, strip off the tin form in which the stud is embedded; the portion in which the pins are

driven should be removed first. To facilitate removal, cut through the tin, open it with a pocket knife or suitable tool, and strip it off. Should the edge of the stud be bent in stripping off the tin form, it can readily be straightened with any blunt tool. When the stud is thus cleared of the tin form, slip a rubber disc over it and the Suction Disc is ready for use. To do this, the rubber disc should be held down with the thumb of the left hand and stretched over the stud with the thumb and forefinger of the right hand.

In regard to the position in which the Suction Disc should be set on the plaster of Paris model, it will be obvious that the flattest part of the palate should be chosen. Two Suction Discs should be used on exceptionally high palates and on V-shaped palates—one on each side. In the case of large palates it is desirable to set the Suction Disc as far back as possible.

Sometimes the full power of the Suction Disc is not immediately exercised when it is first put into the mouth, but after it has been worn for some time its action will be perfectly efficient.

SPECIAL.—To remove the collar from beneath the Stud, after the case is vulcanized, insert the point of an excavator in the slit exactly opposite the letter C in the name C. Rauhe and open it out gradually, without levering it up, so as not to injure the stud.

PRICES.

Rauhe's Suction Discs for Vulcanite Work:

Gold Stud with 3 India-Rubber Discs.....	each	\$ 1.00
	per doz.	11.25
Aluminum-Alloy Stud with 3 India-Rubber Discs.....	each	.50
	per doz.	2.50
Extra India-Rubber Discs, any size.....	per doz.	.30

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Aluminum Dentures

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As testimony to the superiority of this appliance over other machines on the market to do this work, see the number of appliances left with us for sale by people who have immediately discarded them and purchased a

SOLBRIG-PLATSCHICK

on seeing it operated.

Write us requesting information regarding this "never out of order apparatus" and we will send you some interesting information about Dentures and Metals cast by Superheated Steam.

Better still, if you are in Toronto, come to our Depot and see it operated.

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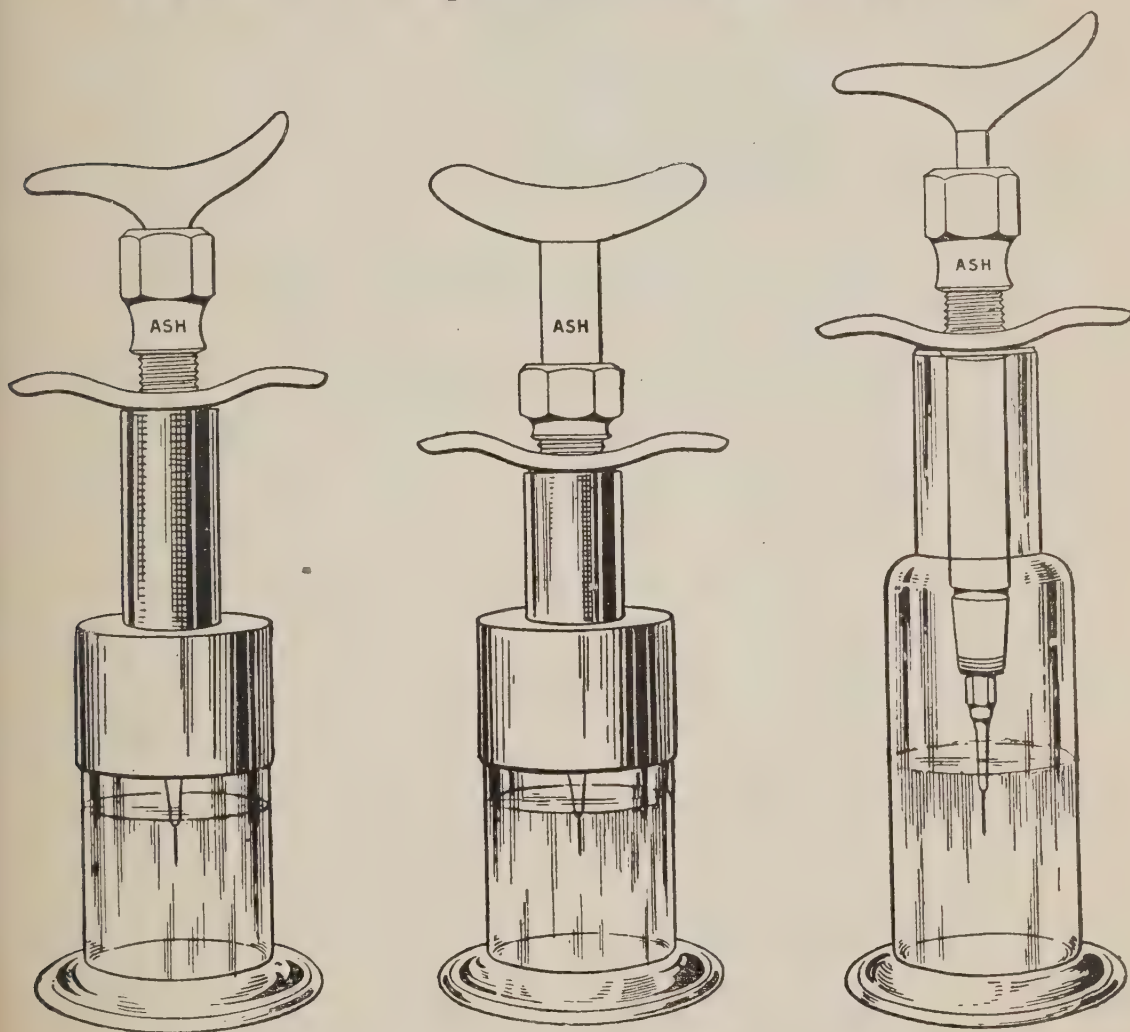
Aluminum Ingots	-	-	-	per lb	\$1.50
Aluminum Ingots	-	-	-	per half lb.	0.75
Aluminum Alloy	-	-	-	per pkg.	0.65

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Nothing aggravates the Dentist much more than to take up his Syringe after his last operation and find it *plugged*. He finds that he has laid it down after using and it has quickly rusted. His time is too valuable to waste drying the needle out. All this annoyance is saved by the

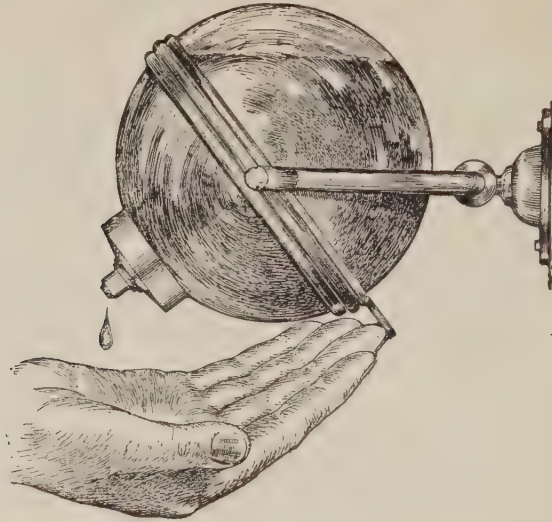
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Keep your needle on your Syringe in the Sterilizer immersed in Lysol. Your needle will never rust, is kept in a sterile solution, is always ready to hand and looks well on your table.

In neat Cardboard Boxes for Mailing, 65c. Each.

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As for the soap itself, we have perfected practically a neutral soap, which being prepared from pure vegetable oils, is the purest form of soap that can be had, free from acids, animal fats and tallow, and it is not only a better detergent and cleanser than cake soap, but is an emolient to the skin, refreshing, stimulating and invigorating.

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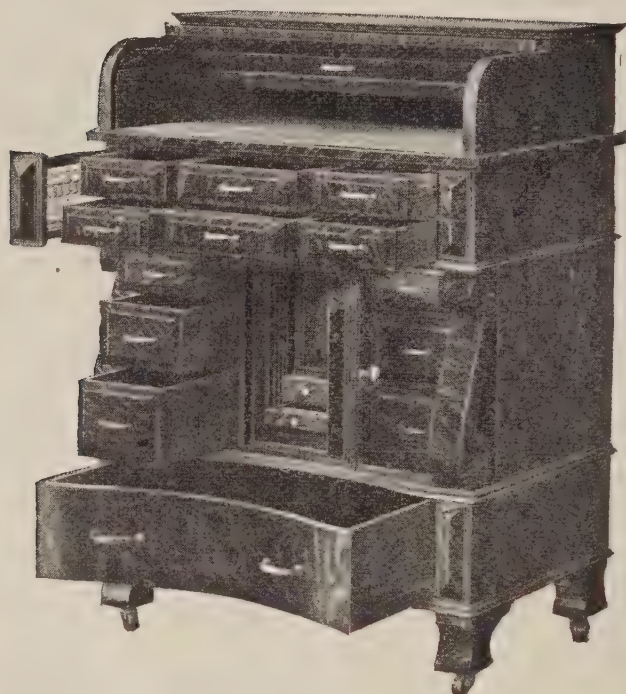
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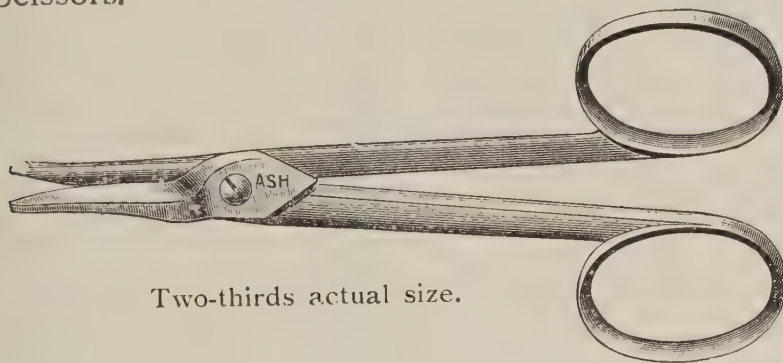
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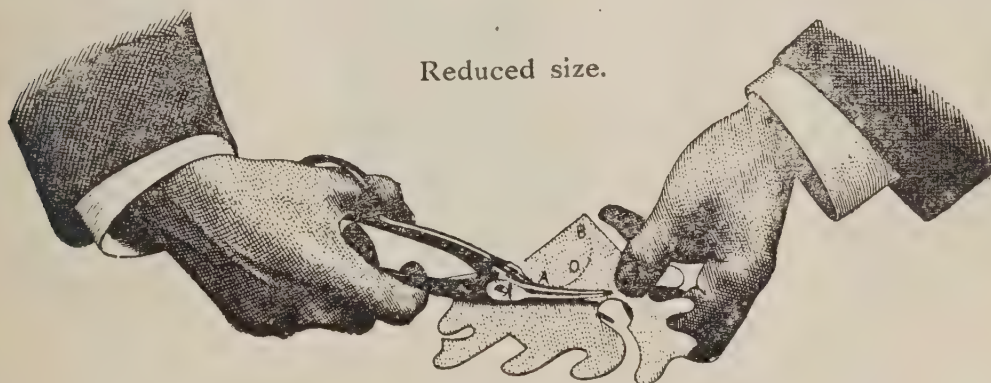
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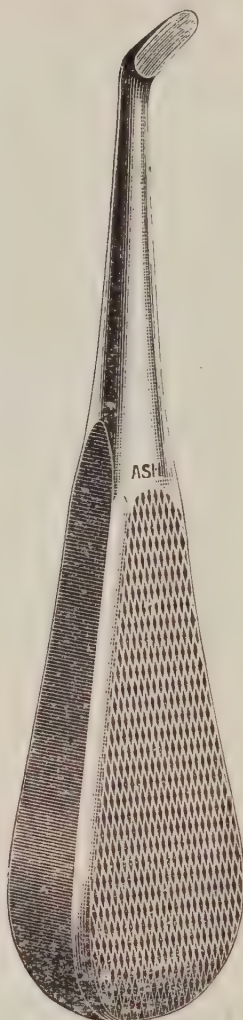
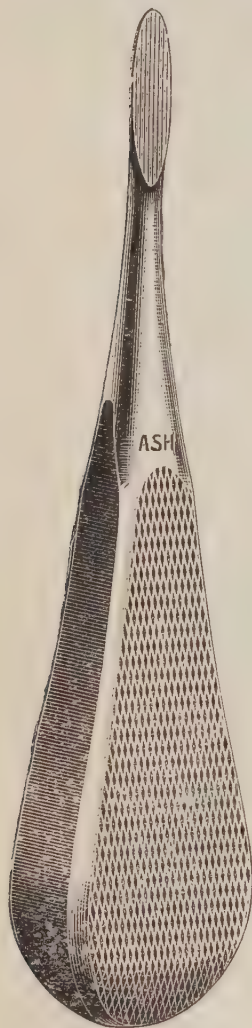
Universal Crown Scissors.....\$1 60

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LEFT



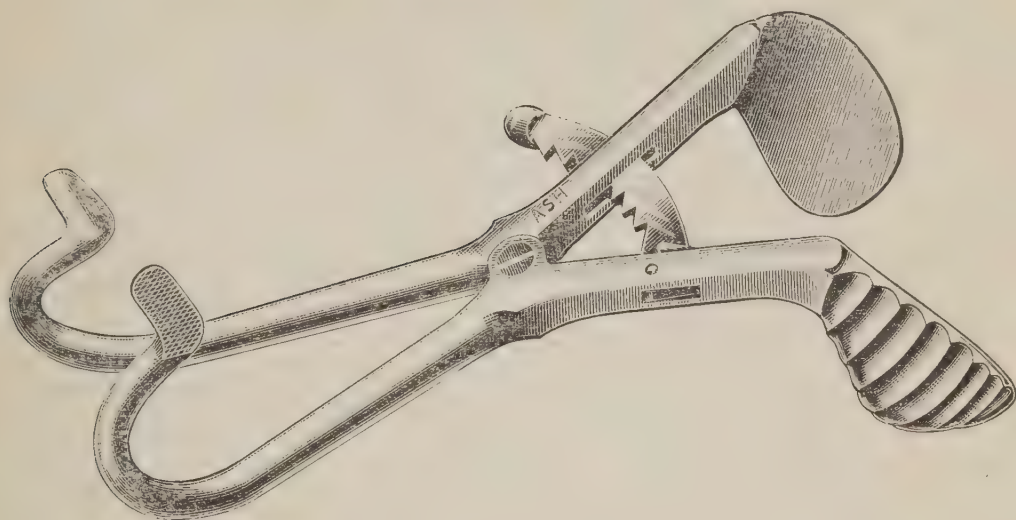
RIGHT

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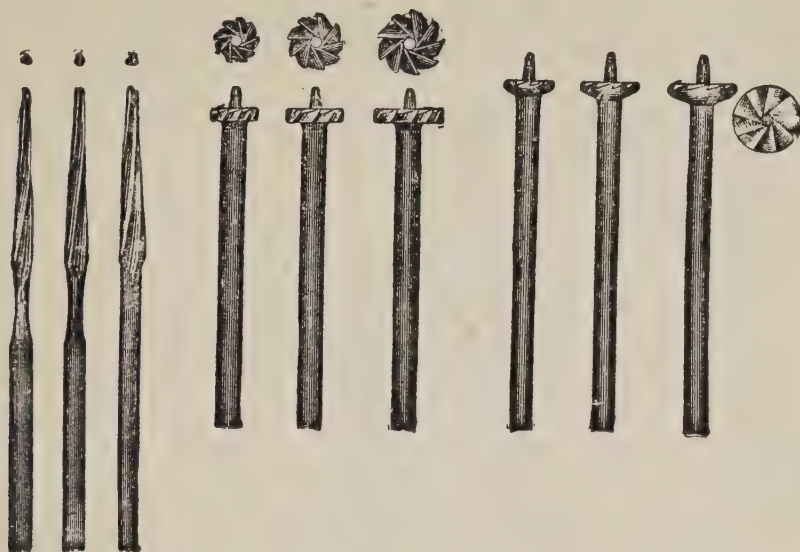
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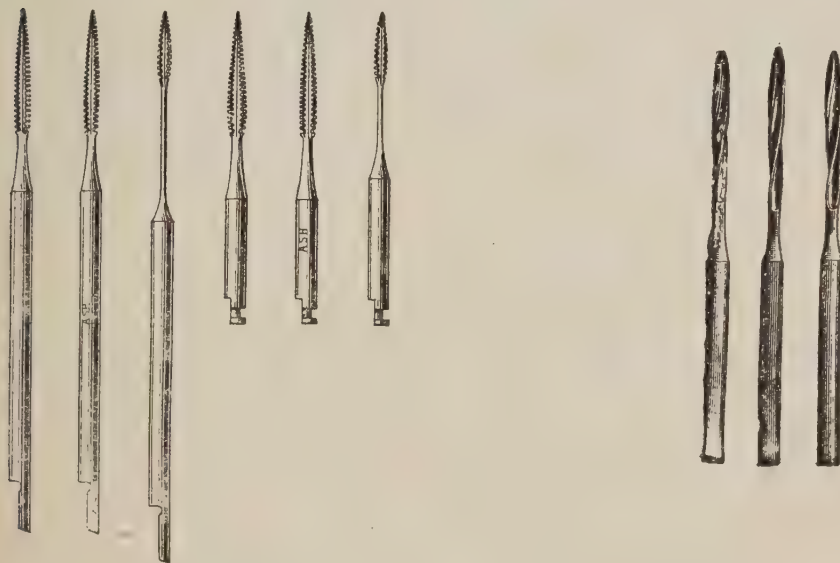


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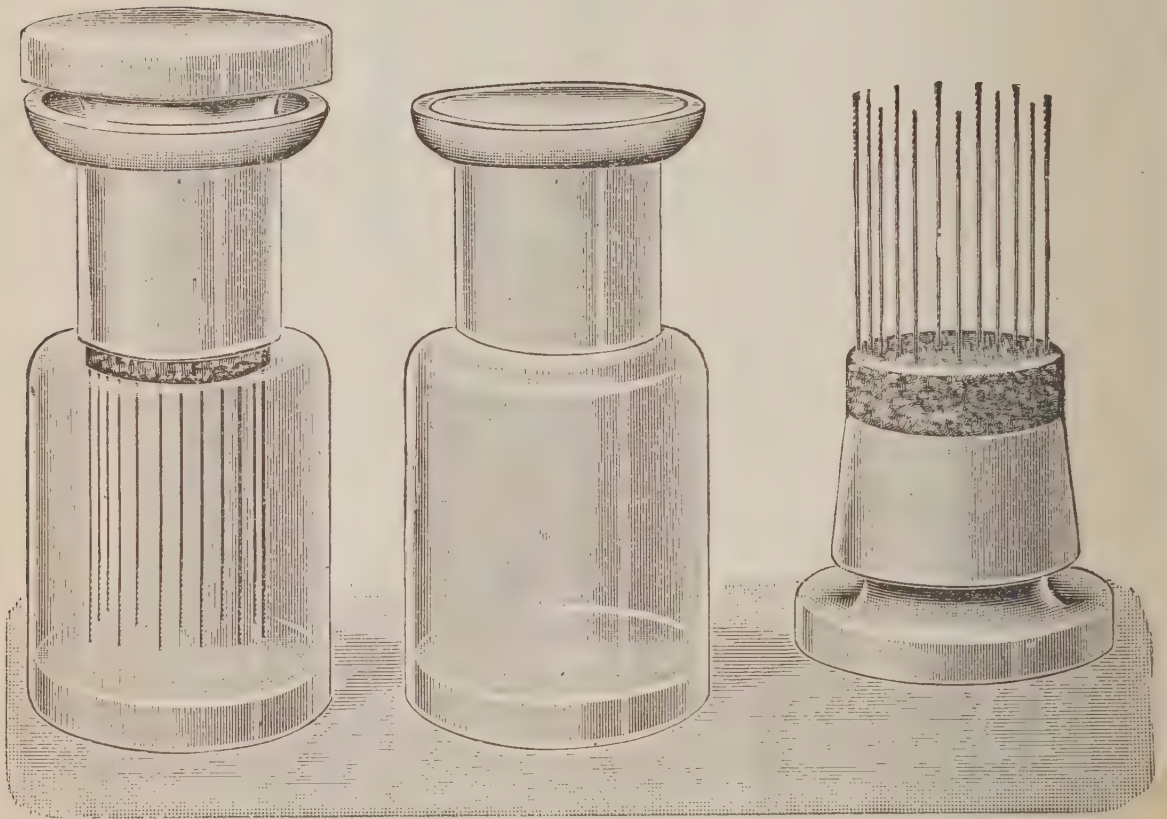


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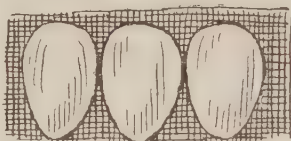
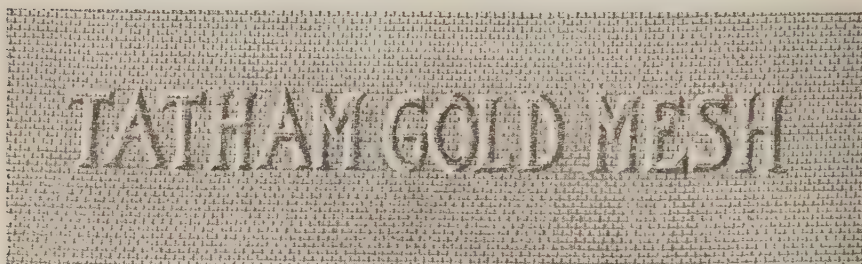
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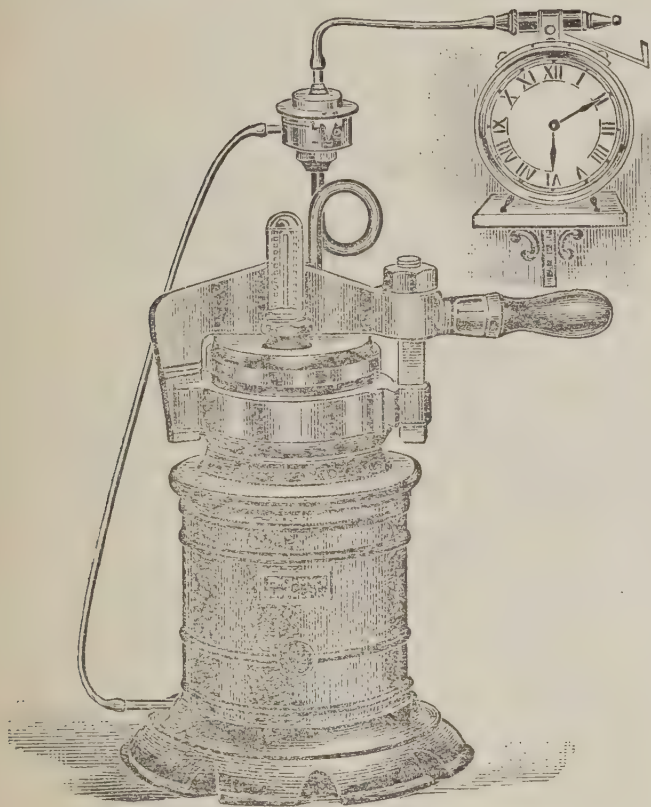
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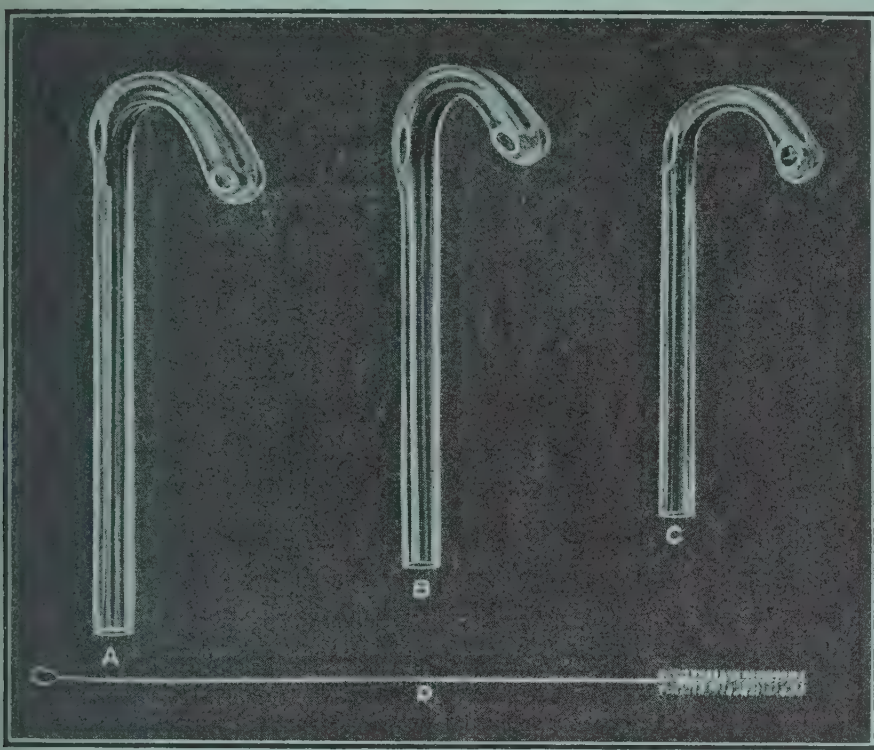
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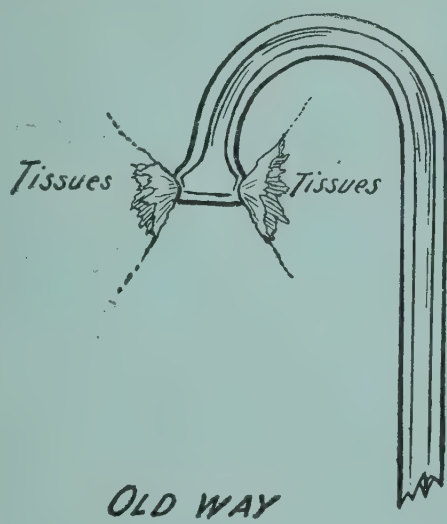
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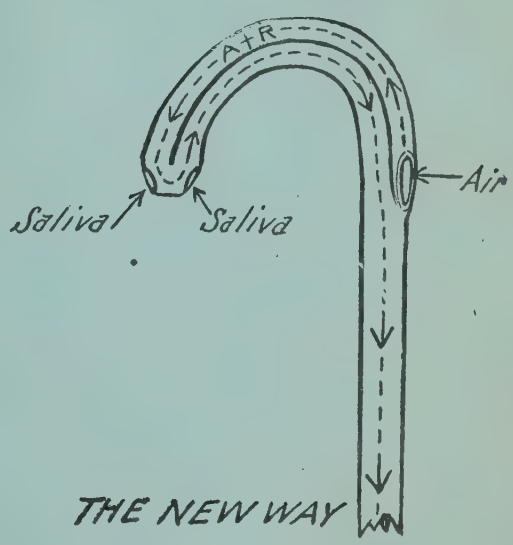
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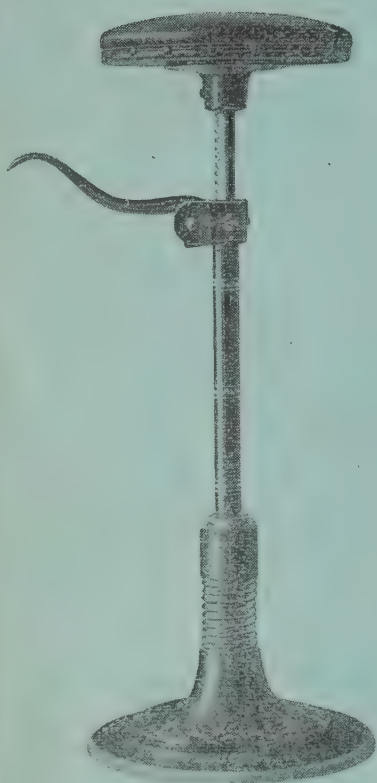
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Instead of having a lot of complicated mechanism to provide for lateral movements, the upright is supported by a stiff spring possessing exactly the proper amount of resiliency to permit the stool to be tilted in any conceivable direction at the will of the operator and yet always bring it to a perpendicular position when at rest.

At the same time it is impossible for the base itself to be tipped up or slip when the stool is in use.

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It is impossible for us to do justice to the radical improvements we have made in this device by descriptive matter. The stool must be seen to be appreciated.

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PITTSBURGH, U.S.A.

ASH'S Canadian Monthly Circular

Issued from Toronto on the First of each Month

VOL. II.

DECEMBER, 1911

No. 3

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Claudius Ash, Sons & Co., Limited

Ash's Canadian Monthly Circular

VOL. II.

TORONTO, DECEMBER 1, 1911

No. 3

SOME USES AND VARIETIES OF DENTURE CLASPS

By D. M. Shaw.

To show the uses of clasps in supporting or steadying dentures, eight plates (the first of a larger series) were constructed to fit plaster models in which sound natural teeth were implanted. Each plate carried one or two of the various kinds of clasps in common use.

The plates fitted the models, but, of course, on dry plaster casts, free from undercuts, such adaptation could not of itself offer the slightest resistance to any vertical displacement of a plate. It was thus possible to see pretty well to what extent and in what manner any particular form or adjustment of clasp tended to restrain vertical (up or down) movement of a plate. Also in some of the plates could be seen the influence of clasps in restraining other kinds of movement, as in horizontal planes—forward or backward drifting, and lateral slipping; as well as the various swingings and tiltings that are known to take place in the mouth.

It is not an uncommon experience to find that the undue tightening of a clasp or any tightening of an improperly designed clasp tends to displace rather than to support a denture in the mouth. In discussing faulty design in denture clasps as a cause of displacement, the faults could be divided broadly into two classes.

First: The selection of the particular tooth or teeth for clasping—quite apart from any pathological condition—may be mechanically wrong. That is to say, the reaction thrust on the plate from a particular tooth clasped may be in such a direction that it is quite unbalanced or insufficiently balanced by any opposing resistance on the same or any other tooth. In the construction of both replacement and regulation appliances, the application of the

elementary law that "action and reaction are equal in amount and opposite in direction" is sometimes overlooked. If a metal "stay" presses on one side (mesial or distal) only, and if on the opposite side of that tooth the plate does not reach or fit quite closely, then it is obvious that in a short time either the tooth or the plate will become displaced. The whole mechanical theory and practice of tooth-regulation rests upon the fact that if an unbalanced force acts upon a tooth, that tooth will sooner or later become altered in position. The thrust of the one-sided stay, then, may be properly resisted and balanced on insertion by the plate margin or another tooth, natural or artificial, but only when the point of resistance is at, or nearly at, the opposing proximal contact point. In some cases the resistance offered to such a stay has been rather on the mesio—or disto—lingual surface of the tooth, and probably, in consequence, the tooth has moved outward. In other like conditions partial rotation has occurred, the fit of the lingual surface not being always sufficiently close to prevent it. Also, if the fit and stability appear to be perfect on insertion, it must be remembered that very few dentures are immovable structures when subjected to masticating or other stresses. Therefore, although the spring thrust of a stay may be quite sufficiently balanced on insertion or when at rest, the balancing resistance will often be withdrawn during the unavoidable movements that take place in use. The tendency will undoubtedly be to move or displace the tooth; but it would be quite fruitless to speculate on or discuss here the various complex conditions under which actually observed displacements take place, or to attempt to assign the causes.

When, in order to insert a plate in the mouth, some filing or paring of the tooth-fitting surfaces is required, care should be taken to avoid cutting too much and so leaving a gap just at the particular point where a balancing resistance to the lateral thrust of the stay is needed. The exact location of the point or points requiring "easing" may often be found by moving the plate up and down a few times with rubbing pressure in the region where the clasp or plate-bearing seems to be too hard or tight. On removing from the mouth a very keen scrutiny will discover one or more small burnished points or areas indicating the surface requiring removal. One or two repetitions of this procedure will improve the fit and make for the comfort of the patient. No doubt the imperfections left by a hurried and heavy-handed "fitting" of the case tend gradually to readjust themselves in the mouth, and a fairly stable equilibrium is eventually brought about, but then only at the expense of discomfort to the patient, and added to that, some shifting of the "bite." A surer way of avoiding the trouble and uncertainties of lateral stays is to fit them, when at all

required, to both sides of isolated or partly isolated teeth, each limb of the stay being free and adjustable.

With the "clasp" proper—going round the labial or buccal surface of the tooth—difficulties of the kind just mentioned can hardly be said to occur, as the lingual surface of even a poorly fitted plate will usually be found to offer the required resistance at some point or other, at least when the plate is first inserted. Mention of the externally fitting clasp brings us to a consideration of those causes of faulty design which we propose to discuss separately.

Secondly: The part of the tooth surface upon which the clasp bears may be so much inclined from the vertical that the clasp slides back along the inclined plane on the smooth, highly polished surface of the enamel. A non-slipping frictional hold on such a tooth surface being nearly impossible, no tightening of the band will prevent displacement of the plate, the elastic spring of the clasp carrying itself and the plate along the line of least resistance in a vertical direction. When a slipping spring of this sort occurs with a band made of flat plate, it is extremely difficult to correct, as a clasp made from plate metal cannot be bent edgewise, i.e., in the plane of the flat side.

On the other hand, with wire bands, particularly with round wire, by bending with pliers, it is easy to re-adapt the band to a more vertically inclined part of the tooth surface. In fact, with round wire it is always possible to get a quite secure non-slipping hold on the external surface of any tooth by bending it to fit at, or slightly beyond, the gum margin of the tooth, just where the enamel surface begins to turn in rootwards, forming there an annular shelf or seat from which a well-fitted wire is not readily displaced. Undoubtedly, secure though that grip is, the eventual effect of such a method of retention on the welfare of the tooth or gum is a point of the first importance; but upon that nothing will here be said.

Less questionable in practice is another way that may be mentioned of obtaining to a modified extent the locking hold of a round wire on a tooth. There are many natural teeth that are marked by slight grooves or depressions running horizontally along the external surface. Into one of these grooves or slight depressions the narrow convexity of a round wire will often dip so as to obtain a non-slipping grip on the tooth; this fact was clearly demonstrated on the specimen models and plates. The grooves or concavities are shallow and usually so narrow that no part of a plate clasp, or even of a half-round wire, can enter or so sink into them as to afford a steady frictional hold on the tooth. Such flat or cylindrical surfaces ride solely on the convexities of the

enamel, and if the general plane of those convex surfaces happens to be inclined from the vertical by even a few degrees, the spring of the clasp will tend to force it off the tooth again. The surfaces of nearly all teeth are of irregular curvature; it is not possible by bending flat metal to bring it into contact with that curvature at more than a very few points. So that the advantage of using round wire is that it takes what may be described as a linear grasp of the tooth. And it will effect its own displacement with certainty unless restrained by a stronger resistance elsewhere, such as a grip round the gingival constrictions on the lingual side of the same or another tooth. Therefore, many of those flat clasps that go well round the buccal surface must in themselves be ineffective unless assisted by a close-fitting grip on the lingual surface at the constriction about the neck there. To secure this, the device in vulcanite work of paring the lingual side of the plaster tooth so as to define more boldly the constriction of the tooth neck is often justified by its usefulness, especially in such temporary work as regulating appliances.

Speaking of clasps in general, an ideal condition sometimes almost realized, but more often impracticable, is that the denture should be normally retained independently of its clasps, which just then touch but do not press the tooth; but the moment a displacement is threatened the clasp acts then to restrain or prevent it.

An obvious yet much discussed method of eliminating all difficulties relating to clasps is to do without them in every case. But accepting the actual fact and condition that in every civilized country thousands of clasps are fitted, attention may be usefully directed to the best ways of making them efficient and least harmful.

A FEW PRACTICAL HINTS

By G. H. Berwick, L.D.S.

Full Upper Vulcanite Dentures.—When there are tuberosities, make use of them, as they form a valuable asset in retention.

In many mouths there is a hard bony ridge in the centre of the palate, sometimes of lozenge shape; this needs a relief chamber (not a suction chamber).

All plates should be as rigid as possible, as a stiff plate does not bend under the stress of mastication and consequently does not chafe the tissues beneath as a springy plate does.

The plate should be carried as far back as the hard palate extends (just within its posterior border); although this has sometimes to be greatly reduced with patients possessing large tongues.

A valuable undercut often exists above the alveolar border in front; this can only be obtained accurately with a plaster impression, which is the best material in nearly every case, and in taking the impression, plaster should always be packed right round the sulcus before placing the tray in position.

Composition I consider only useful in taking flabby uppers (and even then care must be used not to fold the flabby ridge over the front), very flat uppers, and impressions of surfaces needed for occlusion, and then I would recommend not taking an impression in a tray, but casting directly into the impression of the occluding teeth on the bite-block; also for taking rough impressions for trays.

A groove cut in the plaster model, producing a ridge at the back edge of the plate on either side of the mid-line, is advisable where the tissues permit it, also spurs cut into the palate at right angles to the biting surfaces.

All margins of the plate should terminate in an acute angle: this can be done even if built out to restore the contour of face. If they are left thick they form a shelf for food, and a holdfast for the muscles to dislodge them.

Bands of tissue attached sometimes quite high up on the ridge should be noted and allowed for.

The inside of plates should be freed from all plaster, packer marks and bubbles. The better the surface the more easily kept clean: the condition known as "rubber rash" no doubt being due to unclean plates plus the bad conductivity of the rubber.

Where the alveolar ridge is prominent in front, necessitating the teeth being on the gum, wings of vulcanite may be carried on either side towards the fraenum: these should be springy, and the best method is to make them of red rubber and incorporate a tinned piece of piano wire, which can best be done by cold packing the wings before flasking.

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DENTAL PRACTICE—Town of Barrie, Ont., Office of the late Dr. MacLaren, satisfactory terms for quick sale. Apply Claudius Ash, Sons & Co., Toronto, Ont.

TWO EXCELLENT MOOSE HEADS.—Beautiful specimens. Well mounted. Ideal for decoration purposes. A bargain, \$50 each.

DENTAL PRACTICE of late Miss S. Holmes of Tillsonburg. Practice averages \$4,500 yearly. Good opening for active man to acquire a practice among the best people in the town and surrounding country. Apply, J. Carruthers, Barrister, Tillsonburg, Ont.

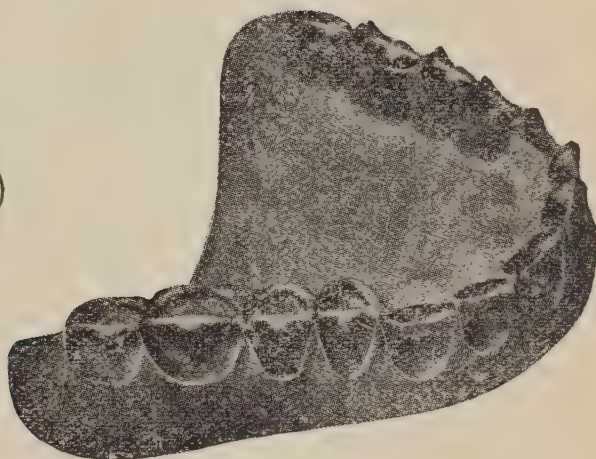
Ash' Diatoric Teeth



SIDE VIEW.



BACK VIEW.

BASE
VIEW.

From the time these teeth were placed on the market they have been the best. Other manufacturers have not only copied them in pattern but also copied the name "**Diatoric**"

Ash's Diatoric Teeth are the strongest teeth made. The moulds are natural and the mineral body the most translucent. We carry a large stock ready for your order.

PRICE 4 CENTS EACH

CLAUDIUS ASH, SONS & CO., Limited

Ash's Dental Rubbers

UNAPPROACHED FOR
**Excellency, Purity, Strength, Elasticity
and Density.**

To mark the genuineness of our Rubbers, the face of every box and envelope which we supply bears this signature and monogram—



and one of the pieces of cloth in which each sheet of rubber is packed bears this signature—



in addition to the name of the Rubber.

Always ask for ASH'S when ordering Dental Rubbers.

For full list of our Dental Rubbers showing NEW and REDUCED prices, see next page.

IMPORTANT.

We have drawn the attention of the profession for months past to the fact that we give full **16 OUNCES** of Rubber TO THE POUND, exclusive of the linen backing. We have also stated that MOST American manufacturers DO NOT give 16 ounces to the pound. We now state that consequent to the agitation in America, demanding full weight and measure, these manufacturers to protect themselves from the law are omitting to mark the weight of rubber on their containers. Is our claim proven?

Ash's Dental Rubbers

From September the following prices will apply on our Dental Rubbers.

NOTE.—Our Rubbers weigh 16 ozs. to the pound, exclusive of linen backing and box.

FOR COATING.

	Per lb.	5-lb. lots	10-lb. lots	20-lb. lots
New Pink, Medium.....	\$6.00	\$5.40	\$5.00	\$4.75
No. 1X Pink, Medium.....				
No. 1 Pink, Light.....				
Gum Pink, Medium.....				
Gum Pink, Light.....	5.00	4.50	4.25	4.00
No. 2X Pink, Medium.....				
English Pink, Medium.....				
English Pink, Light.....				

FOR BASE

Improved Black.....	4.25	3.80
Combination		
White for Side Blocks, etc.....		
Child's "G"		
A. E. Elastic, Dark Brown	3.75	3.35
W Elastic, Dark Brown.....		
Whalebone No. 1, Dark Brown.....		
Whalebone No. 2, Light Brown.....		
Solid Base	3.30	2.97
Dark Red.....		
Flexible Base.....		
Dark Elastic.....		
Maroon.....	2.75	2.45
Red.....		
Orange.....		
Dark Brown.....		
Brown.....		
English Base.....		

SPECIAL—FOR TENDER GUMS, ETC.

	Degrees Fahrenheit	Time H.	M.	lb.
Soft Pink, for lining Palates.....	310	1	15	\$6.00
Soft Dark Red.....	310	1	15	4.25
Vela for Artificial Palates	270	6	0	6.00
Brown Weighted.....				4.25
Pink Weighted.....				6.00
Brown Repairing.....				4.75
Pink Repairing.....				6.00

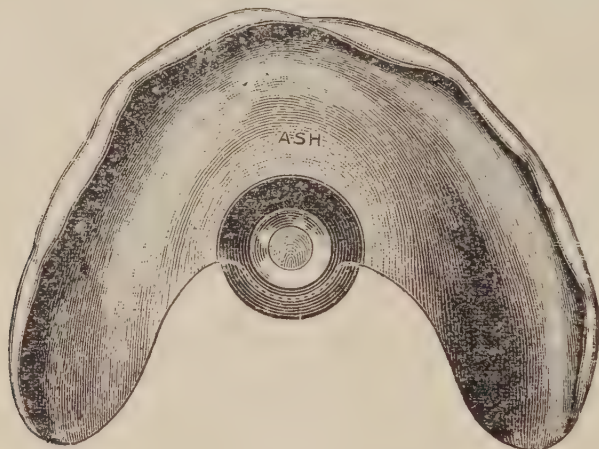
NOTE.—Cash Discounts do not apply on quantity rates on our Coating Rubbers in any quantity over 5 lbs.

Rauhe's Improved Suction Disc for Vulcanite Dentures.

PATENTED IN ENGLAND, GERMANY, FRANCE, AUSTRIA-HUNGARY, BELGIUM,
THE UNITED STATES, ETC.

Rauhe's Suction Disc has been specially designed to prevent injury to the palate. It does not draw down the tissues and produce soreness in the mouth. In this respect it is greatly superior to all existing Suction Discs.

There are no parts about it which can be lost or misplaced, such as bolts, or screws, etc.



It is easily kept clean, owing to the fact that the rubber disc can be removed and replaced in a few seconds, without the use of a tool of any kind.

The anchorage of the rubber disc is so simple that the patient can renew the disc when necessary.

The suction power of the disc is sufficient to hold a denture quite firmly and securely in position.

It is unnecessary to add clasps to partial sets which are fitted with Rauhe's Suction Disc.

DIRECTIONS FOR USE:

Press the disc on the most suitable part of the plaster of Paris model with the thumb, fasten it in position with the three small pins which are supplied with it, being careful to drive the heads right home, and pack the hole in the centre with dental rubber. After the case is packed and vulcanized, strip off the tin form in which the stud is embedded; the portion in which the pins are

driven should be removed first. To facilitate removal, cut through the tin, open it with a pocket knife or suitable tool, and strip it off. Should the edge of the stud be bent in stripping off the tin form, it can readily be straightened with any blunt tool. When the stud is thus cleared of the tin form, slip a rubber disc over it and the Suction Disc is ready for use. To do this, the rubber disc should be held down with the thumb of the left hand and stretched over the stud with the thumb and forefinger of the right hand.

In regard to the position in which the Suction Disc should be set on the plaster of Paris model, it will be obvious that the flattest part of the palate should be chosen. Two Suction Discs should be used on exceptionally high palates and on V-shaped palates—one on each side. In the case of large palates it is desirable to set the Suction Disc as far back as possible.

Sometimes the full power of the Suction Disc is not immediately exercised when it is first put into the mouth, but after it has been worn for some time its action will be perfectly efficient.

SPECIAL.—To remove the collar from beneath the Stud, after the case is vulcanized, insert the point of an excavator in the slit exactly opposite the letter C in the name C. Rauhe and open it out gradually, without levering it up, so as not to injure the stud.

PRICES.

Rauhe's Suction Discs for Vulcanite Work:

Gold Stud with 3 India-Rubber Discs.....	each \$ 1.00
	per doz. 11.25
Aluminum-Alloy Stud with 3 India-Rubber Discs.....	each .50
	per half doz. 2.50
Extra India-Rubber Discs, any size.....	per doz. .30

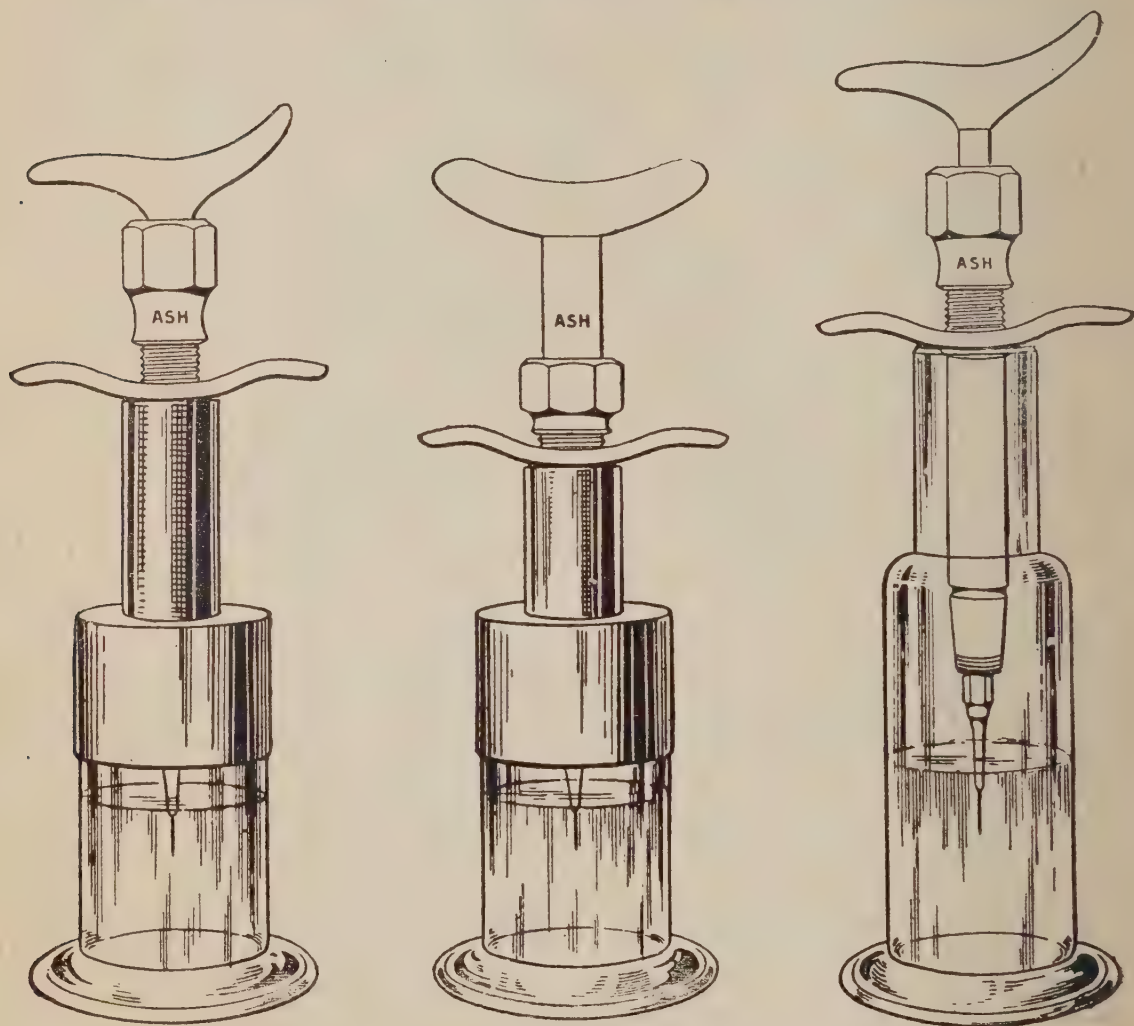
CLAUDIUS ASH, SONS & CO., Limited

SOLE AGENTS

Save your Hypodermic Needles

Nothing aggravates the Dentist much more than to take up his Syringe after his last operation and find it *plugged*. He finds that he has laid it down after using and it has quickly rusted. His time is too valuable to waste drying the needle out. All this annoyance is saved by the

Bardet Syringe Sterilizer

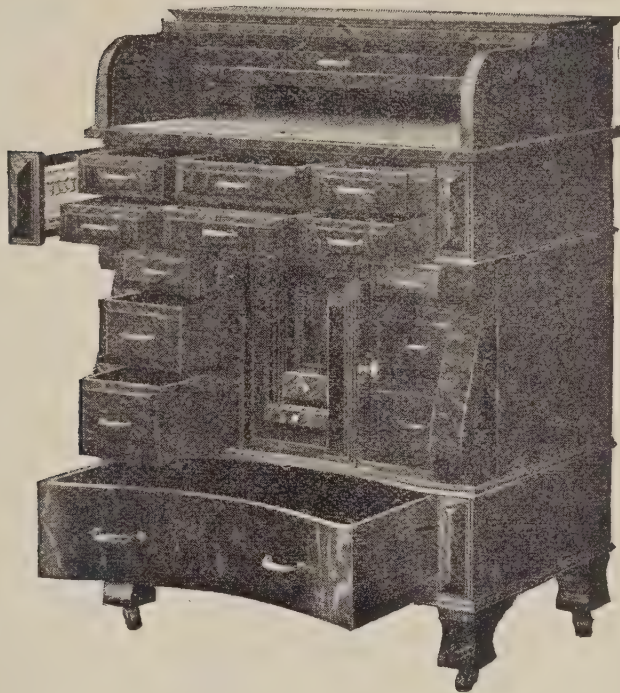


Keep your needle on your Syringe in the Sterilizer immersed in Lysol. Your needle will never rust, is kept in a sterile solution, is always ready to hand and looks well on your table.

In Neat Cardboard Boxes for Mailing, 60c. Each.

CLAUDIUS ASH, SONS & CO., Limited

A BARGAIN



We have on hand this fine Cabinet, absolutely new and without blemish. Complete with Medicine top; all finished in Golden Oak.

Price \$225.00

For a Quick Sale we will accept \$190.00

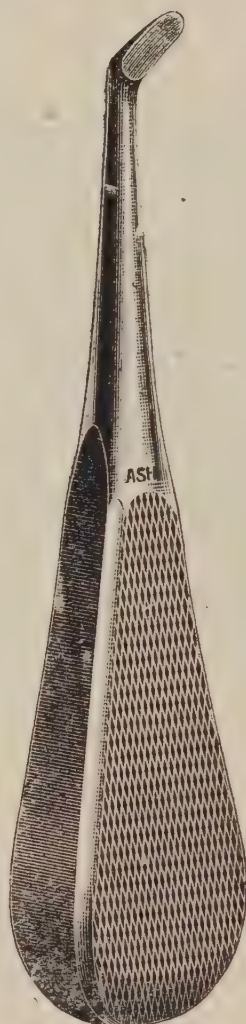
With 10 per cent Discount for Cash

Claudius Ash, Sons & Co., Limited

A Useful Set of Elevators

COLEMAN'S

HOSPITAL PATTERN



LEFT



RIGHT

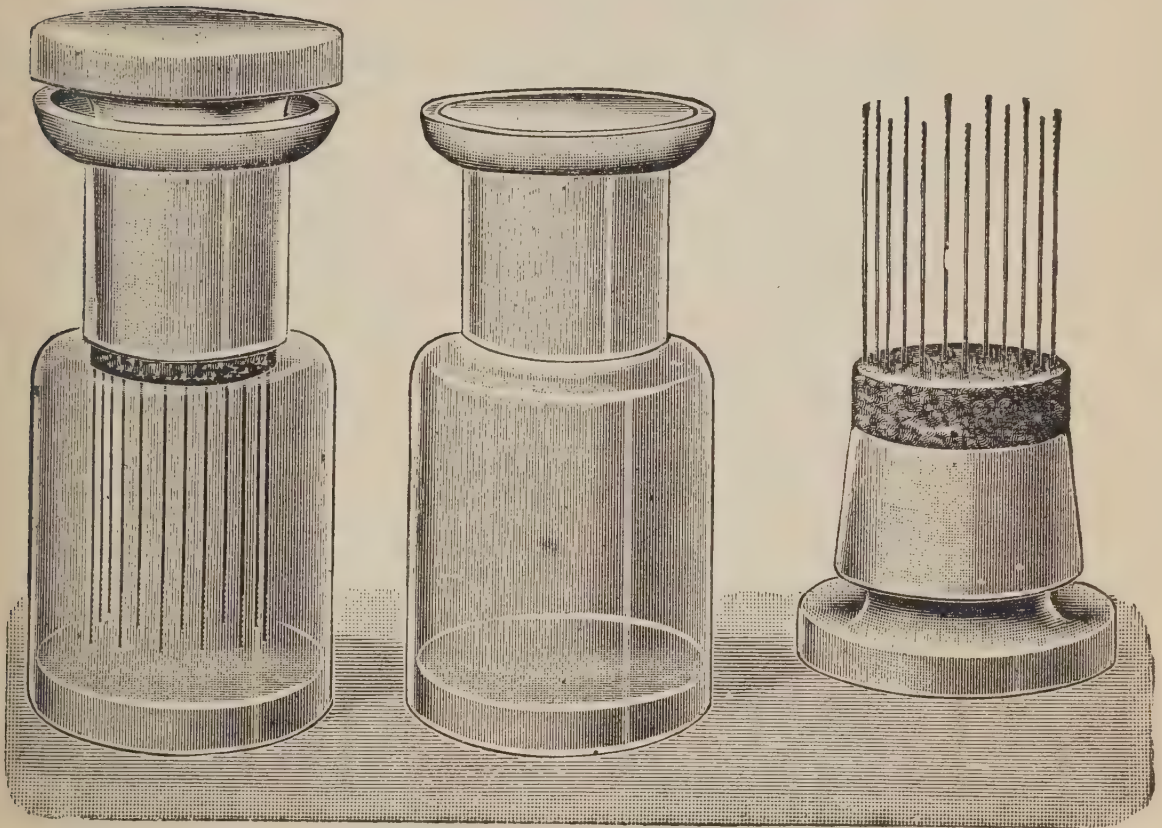
These Elevators are capital patterns and are largely used. If you have much extracting to do you will find these Elevators most useful.

PRICES

Coleman's	-	-	-	\$1.50
Hospital Pattern	-	-	each	1.85
Universal Adjustable	-	-	-	2.25

CLAUDIUS ASH, SONS & CO., Limited

BOTTLES FOR NERVE INSTRUMENTS

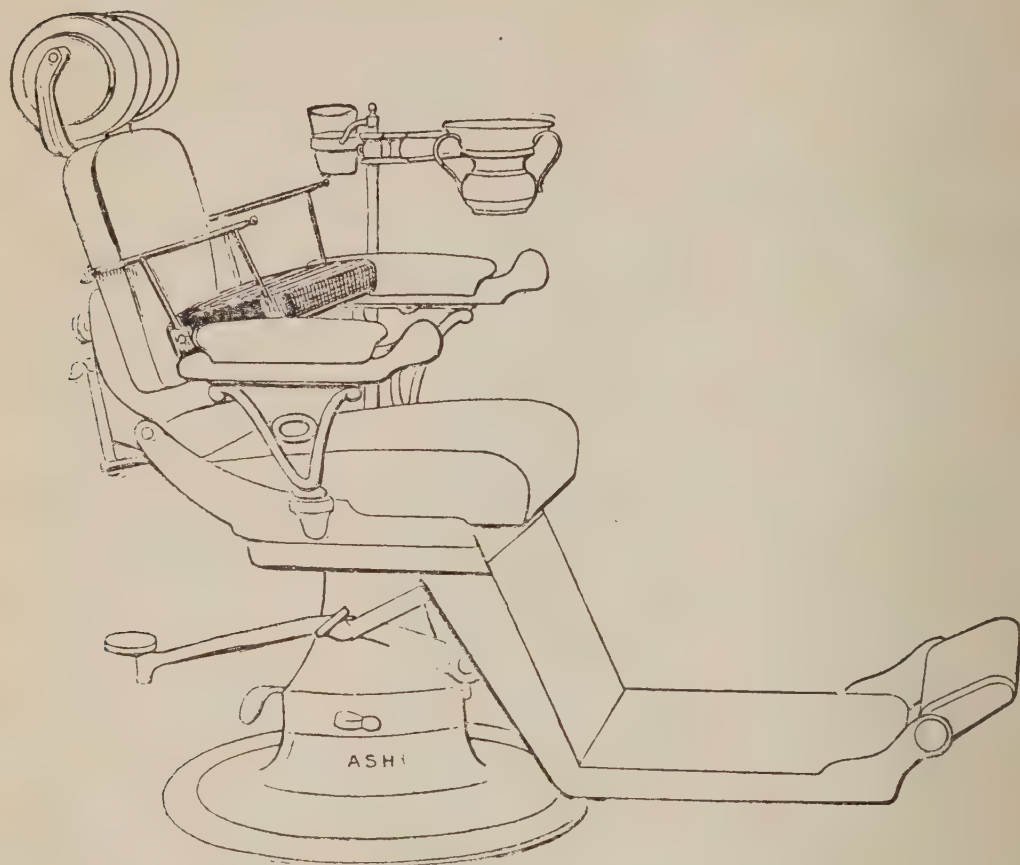


These Bottles are labelled respectively Sterilizing Fluid and Alcohol. There is no better method of keeping Nerve Breaches, and they make a handsome adjunct to your cabinet. Your instruments are always kept in a sterile solution, and if Lysol is used your Broaches will never rust.

Set of two Bottles in cardboard case - - - 80c.

Claudius Ash, Sons & Co. Limited

Child's Seat For Dental Chairs



The Child's Seat is shown separately and attached to chair. It is quickly detached and will be found a boon to many offices,

Upholstered in Dark Green Leather - \$8 00

CLAUDIUS ASH, SONS & CO., Limited



Bottle for Local Anaesthetic

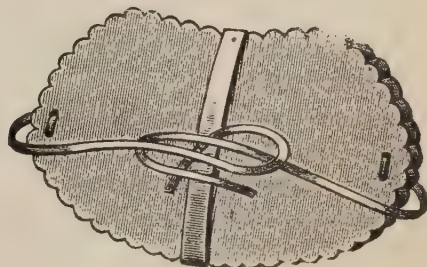
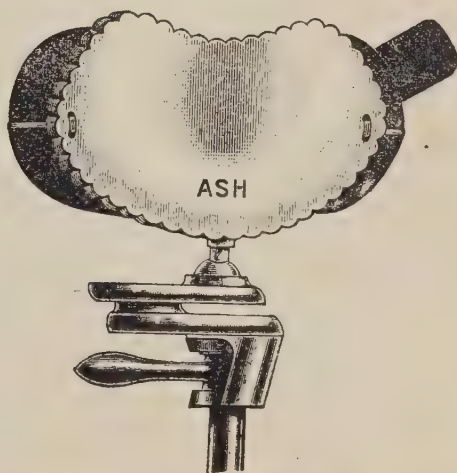
A nice attractive bottle with a
burned on label.

60 CENTS EACH

Sectional Head Rest Pads

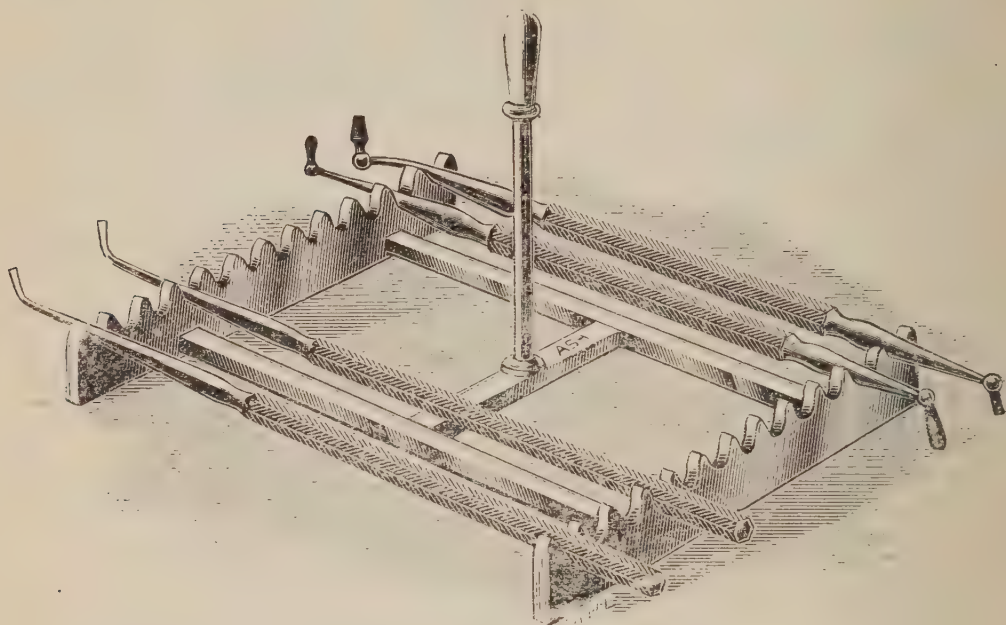
A very useful paper pad
suitable for Wilkerson
or any Sectional Head
Rest.

80 Cents Package



CLAUDIUS ASH, SONS & CO., Limited

Nickle-Plated Instrument Rack



This Rack makes a handsome adjunct to your Cabinet and Allan Table and has been found most useful by operators the world over.

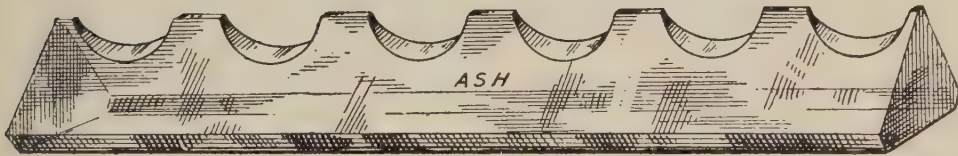
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PRICE 80 CENTS

=====

CLAUDIUS ASH, SONS & CO., Limited

Glass Instrument Rack



A neat and inexpensive Glass Rack to
rest your Instruments on

It saves many a soiled Table Cover

=====

PRICE 25c. EACH

=====

CLAUDIUS ASH, SONS & CO., Limited

Aluminum for Casting

If you want the Best Aluminum Specify

“ASH’S”

If you have not already used Ash's 99 per cent. pure Aluminum or Ash's Aluminum Alloy, send in a Mail Order now.

We have many unsolicited testimonials from one end of Canada to the other.

PRICES

Aluminum Ingots	- - -	per lb	\$1.50
Aluminum Ingots	- - -	per half lb.	0.75
Aluminum Alloy	- - -	per pkg.	0.65

CLAUDIUS ASH, SONS & CO., Limited

Beutelrock and Gates' Glidden Drills

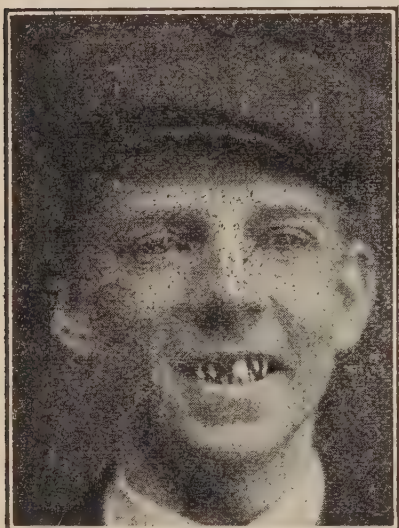
We desire to draw your attention to these articles as being those in which quality of material and manufacture count for so much. Many so called Beutelrock and Gates' Drills are so in name only and are not worth a place in your office.

We have always used the best material obtainable and as the work to be accomplished with them is so delicate and important we make them to the highest standard. The price is attractive also.

For either Hand Piece or Right Angle, \$3.00 per doz.

CLAUDIUS ASH, SONS & CO., Limited

Reproduction of Restoration made by DR. A. McALPIN,
Bradford, Pa., with "SCHOENBECK CEMENT."



Schoenbeck Silicate Cement

The Nearest Approach to Nature's Enamel Known to Dental Science

The illustrations shown on the next page are examples of work done by Dr. A. McAlpin of Bradford, P.A.

There is no other Silicate Cement that can be employed to do restoration work that can be compared to Schoenbeck. This Cement has recently been savagely attacked by the manufacturers of other cements. Schoenbeck's cement makers are grateful for this gratuitous advertising which like every other **"knock" is a "boost."**

The sales are increasing and the satisfied customers are daily becoming more numerous.

This Cement has gained and maintains the foremost position of all Cement fillings.

SUPPLIED IN THE FOLLOWING SHADES

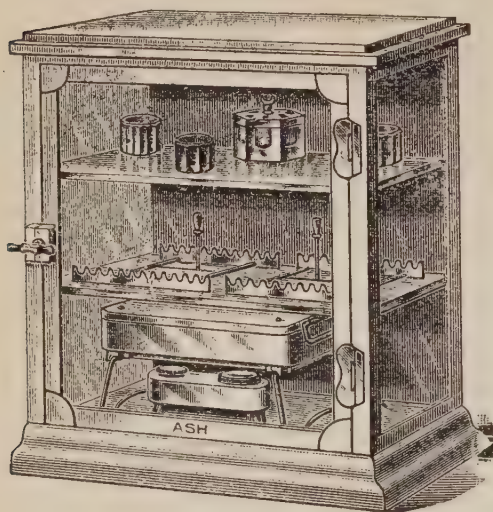
No. 1	Whitish	No. 8	Greenish Grey
2	White Yellow	9	Bluish White
3	Light Yellow	10	Brownish
4	Yellow	11	Pink Light
5	Dark Yellow	12	Pink Medium
6	Light Pearl Grey	13	Yellowish Grey
7	Pearl Grey	14	Brownish Grey
		15	Slate Bluish

PRICES

1 Color, Small	\$1.50	1 Color, Large	\$3.00
4 Color Packet	5.50	6 Color, Packet	8.00
1 Small Powder	1.00	1 Small Liquid	.50
1 Large Powder	2.00	1 Large Liquid	1.00

Pure Cocoa Butter.....Per Tube .20

Schoenbeck's Special Varnish.....Per Bottle .35



ASH'S No. 4 ASEPTIC CABINET

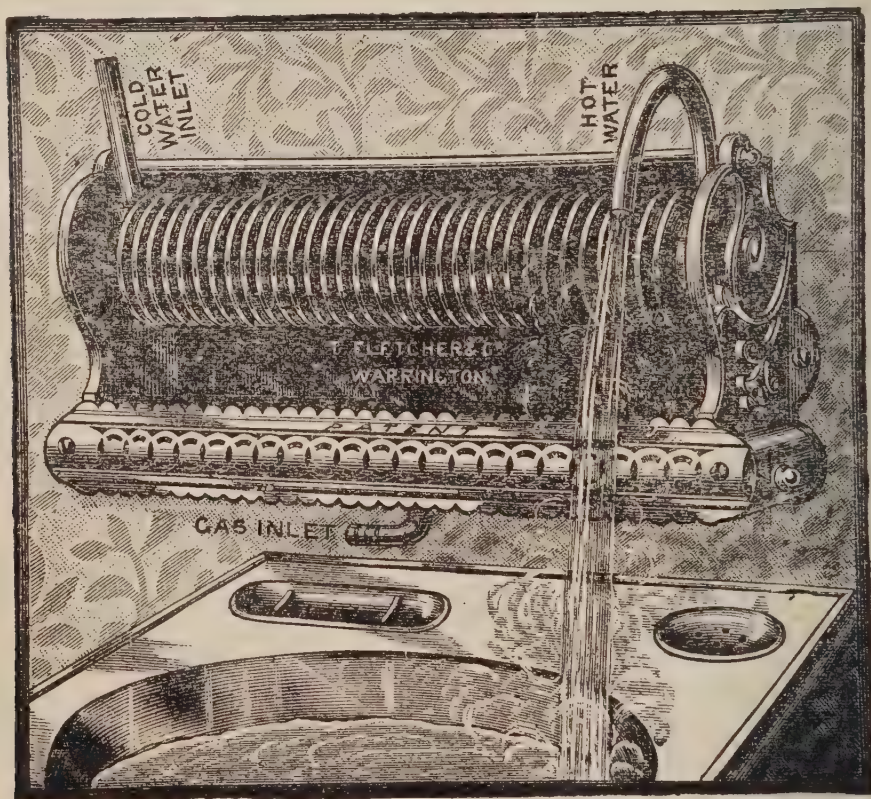
With Metal Back and Metal Frame
Enamelled White; Glass Front
and Sides and two Plate Glass
Shelves.

Dimensions: 17 in. high, 12 in. wide,
8 in. deep.

From these measurements it will be seen
that this Cabinet is a convenient size for
standing on a mantelpiece, an ordinary
shelf, or a table. It is of British manu-
facture, strongly made, and well finished.
It will hold a good number of instruments
and sundries.

Price, empty	-	-	-	-	\$12.00
With word "Sterilizer" in gold	-	-	-	-	13.00

INSTANTANEOUS WATER HEATER

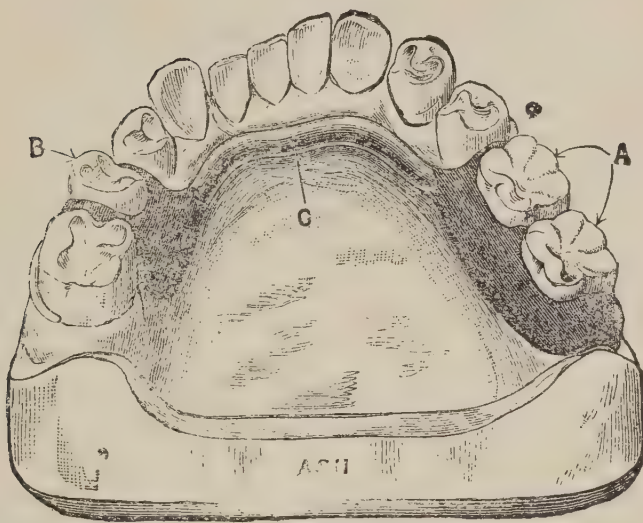


Gives a steady stream of nearly boiling water. A $\frac{3}{8}$ -inch clear
bore gas supply is sufficient for the heater.

Price	-	-	\$14.00		Price, N.P.	-	-	\$16.00
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ASH'S OVAL GOLD CASED WIRE

For Bar Lowers



Bar Lower Dentures have come into universal demand. Note some of their advantages.

No tendency to push teeth outwards.

Greater cleanliness.

Less bulk.

Greater rigidity.

Per dwt. \$.40

CLAUDIUS ASH, SONS & CO., Limited

A Popular Priced Wax

IS IN GREAT DEMAND

The large sale for our ENGLISH WAXES bears testimony to their great value.

No. 3, Pink.....	per lb.	.65
“ 2, “	“	.80
“ 1, “	“	.90
Brown for Base.....	“	.85
Extra Tough Pink.....	“	1.00
“ “ “	“	1.25
“ “ Yellow	“	1.00
Black for Inlays in fine sticks, per box		.35

SEND US THAT MAIL ORDER NOW

CLAUDIUS ASH, SONS & CO., Limited

GALLOWAY'S

SUCTION DEVICE

FOR LOWER DENTURES ONLY

Patented in United Kingdom and U.S.

Other Patents Pending

This Suction is the most satisfactory ever offered. It consists of a curved metal bar, which has counter sunk holes in it for four pins to secure it to a plaster model, and a vulcanized strip of Ash's specially prepared Vela Rubber which so well withstands the oral fluids.

This Rubber Strip is held in position in the denture by the suction which is produced by the small holes on the curved surface and to the gum by the suction through the larger holes on the flat surface. The Strip can be removed and cleansed, and replaced in half a minute.

The device is cleanly and secures the denture properly without any discomfort to the patient.

Price \$1.00

Sole Agents—

Claudius Ash, Sons and Co., Limited

BORITH

An excellent preparation to recommend your patients for cleansing Dentures. It is a thoroughly reliable preparation.

Price \$2.00 doz.

ZIMO

The best obtundent on the market for the painless extraction of teeth and minor surgery; Antiseptic and Germicidal. Can be used in all cases; safe and effectual. No bad after effects. Once used, always used. "ZIMO is a great practice builder," as everyone says who has used it. 4 oz. bottle, **\$1.00**; 6 bottles, **\$5.00**. Every bottle guaranteed. Try a bottle; if not all right send it back and get your money.

Manufactured and put up by

Dr. S. T. WHITNEY,

St. Stephen N.B. Can.

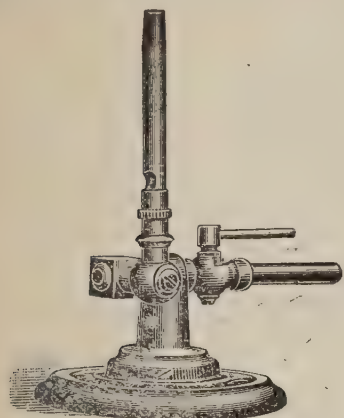
General Agents:

CLAUDIUS ASH, SONS & CO. Ltd.

11-13, Grenville Street, Toronto, Ont.

No. 4-C Blowpipe and Bunsen Combined

TWO EFFICIENT APPLICANCES AT THE PRICE OF ONE



The No 4-C Blowpipe and Bunsen, combines an excellent bench Blowpipe with an exceptionally efficient Bunsen in such manner that the change from one to the other is a matter of but an instant.

The Blowpipe head is fitted to the Bunsen by a taper joint, and is ready for instant use by keeping the air tube of the head connected to the Bellows. It can be turned in any direction to bring the flame to the desired location. A swivel at the base affords a wide range of adjustment in position, so both appliances become practically universal in their scope.

No. 4-C, as a Bunsen with Blowpipe head removed.



No. 4-C as a Blowpipe.

The Blowpipe flame is of the kind which can be operated with a blast from the mouth, a foot blower or compressed air, as preferred, and will give good results under all conditions. A very fine needle point flame is readily produced with a light blast or plenty of gas and a heavy blast will give a large powerful brush flame.

The Bunsen is provided with a threaded air shutter, which is capable of much closer adjustment than the slide commonly used, and is not likely to be accidentally thrown out of adjustment.

This combination will do practically all the soldering of a dental laboratory and do it to your entire satisfaction.

Illuminating Gas Only. Oxydized Copper Finish

Price, No. 40-C Combined Blowpipe and Bunsen, \$3.75

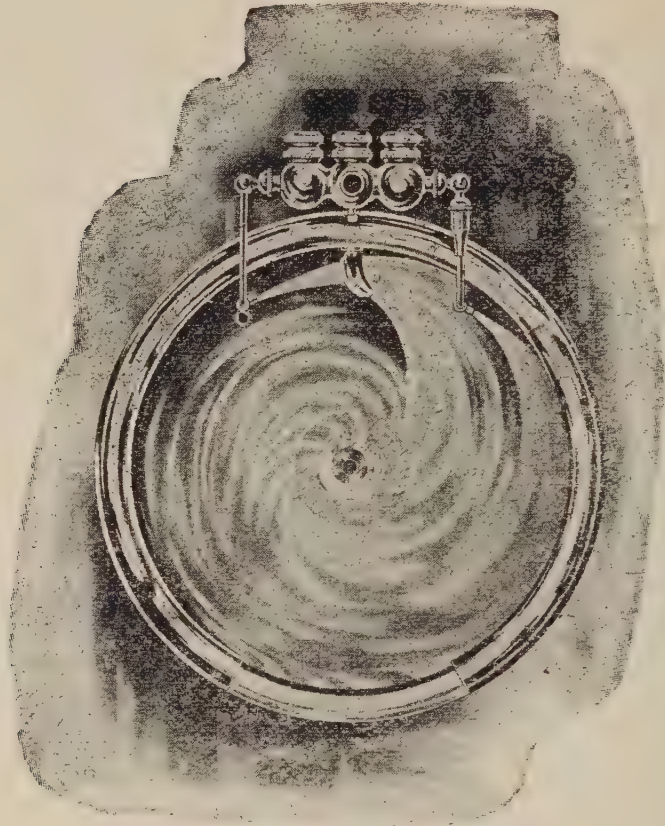
YOUR DEALER

INFORMATION DIRECT

Buffalo Dental Manufacturing Co.

BUFFALO, New York, U.S.A.

Clark Double Bowl Spittoon



The inner bowl covered with a flushing veil of clean running water. Has proper waste and air outlet.

Washers require changing about once each year. A Spittoon you are proud to say you own.

Made by

A. C. CLARK & CO.

Grand Crossing

- -

CHICAGO

By the way, have you seen the Clark-Gambati Water Heater and Filter? If can be attached to your spittoon. Write for the book.

The **PYORRHOCIDE**

Post Graduate Pyorrhea **CLINIC**

1 UNION SQUARE . NEW YORK, U.S.A.

Conducted by W. F. SPIES, D.D.S.

offers you a FREE POST GRADUATE COURSE which will enable you to successfully TREAT PYORRHEA and SAVE TEETH.

ILLUSTRATED LECTURES covering the causes and effects of pyorrhea and its treatment.

CLINICAL EXPERIENCE in the *treatment and completion* of cases by *yourself* under the personal supervision of Dr. Spies.

PRACTICAL USE OF SPLINTS on extremely loose teeth when indicated, and in fact every phase of pyorrhea treatment, and prophylaxis is taken up from the standpoint of getting results in general practice.

PLAN TO TAKE THE COURSE IN NEW YORK

and in the meantime write for any information you may desire concerning the treatment of pyorrhea in general, or regarding individual cases described by you.

Address :

THE PYORRHOCIDE CLINIC

1 Union Square . . . New York City

N.B.—If you are interested in mouth health write for the most complete work on Pyorrhea ever written. The book is illustrated in color and shows numerous cases of pyorrhea in various stages and will be sent FREE ON REQUEST.

The one particular part of dental equipment that should be aseptic is the arm with which the patients hands come in contract. On the cuspidor side of the chair an arm of this kind is especially indicated.

Porcelain Enameled Chair Arms

Patent Applied for



This arm is made of cast iron coated with a high fusing enamel of the same quality as used in bath tubs of the better grade and will not crack, peel or discolor.

A wooden block is inserted in the under side of the arm which provides means for attaching it to the iron arm support after the old arm is removed.

They are absolutely sanitary and are to be cleaned with a damp cloth after each patient vacates the chair. It is readily seen that the spreading of contagious diseases is impossible when the chair is equipped with Porcelain Enameled Arms.

These arms add just as much to the appearance to a black enamel chair as they do to a white one, in fact the contrast between the black body of the chair and the white arm it particularly pleasing.

Order a pair from your dental dealer to-day and be the first in your locality to possess a pair of Porcelain Enameled Arms.

Price in Canada \$6.00 a pair

LEE S. SMITH & CO., Mfgs. Pittsburgh, U.S.A.

BEWARE

Dentists complain to us that they do not receive Davis Crowns when they order them.

The Cause and the Remedy

When "Davis" Crowns are ordered, many dentists receive the "Davis" Pin with some substitute porcelain. This substitution is made for reasons in which financial conditions and profit predominate. It is therefore, common practice to send you some other Crown with a "Davis" Pin, when you ask for a Davis."

When personal financial reasons, instead of customers' accommodation, dictate a business policy, it is time for the customer to look out for himself.

How to recognise the "Davis" Crown at a glance, and thus disarm the substitutors

If you can read the number with the biting edge up—like this



You have a
"Davis"

If you read the number with the biting edge down like this



You have an imitation
or a substitute

CONSOLIDATED  DENTAL MFG. CO.

Let us send you a nice Case
of two hundred Dowel Crowns

TWENTY DOLLARS

You cannot get one hundred
of any other reputable Crown
for less than

NINETEEN DOLLARS.

Added to this, Ash's Mineral
Body of which all our teeth
and crowns are made, is the
only body that can be success-
fully polished after grinding.

Our Moulds are the most natural and the
grinding surfaces are better than on
any other make of Crowns.

Claudius Ash, Sons & Co., Limited

ASH'S Canadian Monthly Circular

Issued from Toronto on the First of each Month

VOL. II

JANUARY, 1912

No. 4

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A New Method of Root Canal Treatment.

Review of 1911.

Second Hand Goods.

Advertising Section.

New Goods and Novelties.

CLAUDIUS ASH, SONS & CO., Limited

5-12 Broad Street, Golden Square

London W., England

Canadian Branch: 11-13 Grenville Street, TORONTO, Ont.

Phones North 4800-4801 After Hours C. 2631

BRANCHES

Liverpool, 78 Mount Pleasant.

Manchester, 118a Oxford Road.

Paris, 12 Rue De Hanovre.

Marseilles, 4 Rue Moustier.

Lyons, 12 Rue Du President Carnot.

Berlin, Jagerstrasse, 9.

Hamburg, Gansemarkt, 62 and 63.

Frankfurt, am Borsenplatz.

Milan, 11 Via Monte Napoleone.

Amsterdam, 149 Weteringschans.

Vienna, Spiegelgasse, 2.

Budapest, Ferenciektere, 4.

Constantinople, Rue Zumbul.

Copenhagen, Boldhusgade, 3.

Christiania, Tordenkjoldsgade, 9.

Stockholm, Malmskilnadsgatan, 44.

St. Petersburg, 21 Gogolstr.

Moscow, Kusnetzki Pereulok, 3.

New York, 30 East Fourteenth Street.

Toronto, 11 and 13 Grenville Street.

Alexandria, Trieste St. No. 1.

Cairo, 4 Taher Street, Opera Square.

Breslau, Gartenstrasse, 22.

Ash's Selection "B" Impression Trays

This set, consisting of 5 lower and 7 upper, German Silver, N.P. Trays has been put on the market subsequent to many requests.

The patterns are somewhat out of the usual run of American styles, and are not intended to replace them, but rather as a valuable addition.

These trays are mostly extra sizes and special forms, and will be found most useful in many cases that have heretofore been difficult.

The quality and finish of these trays cannot be excelled.

Set of 12, Selection "B" - - - - - \$5.00

Claudius Ash, Sons & Co. Limited

Ash's Canadian Monthly Circular

VOL. II

TORONTO, JANUARY 1, 1912

No. 4

A NEW METHOD OF ROOT-CANAL TREATMENT WITH SPECIAL REFERENCE TO PUTRID PULPS.

By Dr. Janusz Ritter Von Wislocki, of Cracow.

Before entering upon a discussion of this method, promoted and tested by Prof. Lepkowski, of Cracow, some years ago, I should like to emphasize some important points of the history of root-canal treatment and the preservation of gangrenous roots.

If the enamel is injured by any cause of a traumatic, chemical or thermal nature, a destructive process sets in—i.e. decay. During the primary stage caries causes no trouble at all; but when the process, after having destroyed both the enamel and dentine, involves the soft tissues, i.e., the pulp, inflammatory symptoms may arise, such as hyperaemia, infiltration, raised temperature and pain, owing to the action of micro-organisms and the products of their metabolism.

Left to itself, this process results in death of the pulp, and at last in colliquation, as being the final form of gangrene. Owing to the nerve and blood-vessels being destroyed, the subjective symptoms (pains) cease.

This improvement is but temporary, because pains set in again that do not originate from the pulp, but from the pericemental membrane and the periosteum. The inflammation extends to the membranes which cover the tooth, and provokes alveolar abscess with its sequelae.

Previous to Lister's antiseptic teaching, teeth of this kind used to be extracted. It is only since this period that endeavors

have been made to preserve teeth the pulps of which have been destroyed either artificially or naturally. The aim of preserving is retention of the tooth in the alveolus and the avoidance of recurrent trouble. To achieve this the tooth should first be cleansed of the detritus from the gangrenous soft tissues, which if left, produces decomposition and consequently organic acids (acetic acid, lactic acid) and proteines, the latter again being decomposed into sulphuric acid, putrescin, neuridin, cadaverin, or into ammonia.

Before the era of antiseptis and asepsis, no operator risked the permanent filling of even the most accurately cleansed tooth (though decayed teeth have been filled for some thousands of years) as it is well known that filling a tooth under the conditions then existing did not save it from being extracted, owing to the want of a remedy to destroy and remove the micro-organisms from the root-canal, from its walls, and from the spaces below the odontoblasts. It was only after the introduction of antiseptis and asepsis that the attention of dentists was attracted to the preservation of roots. Much stress has been laid upon cleansing root-canals and the spaces below the odontoblasts as thoroughly as possible, and upon sealing the cleansed cavities with filling materials. The action of antiseptic preparations applied in surgery was likewise tested in dental practice.

In 1874 A. Witzel introduced carbolic acid, which was rejected because of its too quickly coagulating proteines, and thus preventing the preparation from penetrating into the remote portions of the tooth. Ostermann (1875) recommended salicylic acid, and others recommended salol, lysol, etc. In 1885 A. Witzel advocated the use of a 20% solution of corrosive sublimate—a remedy which was rejected because it blackened the tooth, owing to the action of the mercury, and because it produced periostitis. Weiser and Smreker proved that the same effects were produced by the use of even a 1% solution of corrosive sublimate. Later Scheff recommended iodiform; Walkhoff, chlorphenol; Schmidt, thymol; Miller, corrosive sublimate with thymol; Kirchner thymol with iodiform—a combination which subjected to the electrolytic action of a current, liberates iodine *in statu nascendi*, the latter being a powerful antiseptic agent. Blair's apparatus for

generating iodine vapours is based on the same principle. Sachs and Sternfeld advocated the use of thioform and kreoline as being a most efficacious remedy. Bethel recommended a 40% solution of silver nitrate; Schreier a sodium and potassium compound; Schreiter caustic soda; Kirk Pierce and Baur sodium dioxide; Callahan, a 50% solution of sulphuric acid. Bonnecken modified the latter in adding sodium dioxide. Arkovy recommended muriatic acid; Hess, aqua regia; Hoffendahl, Zierler and Brenner employed an electric of 3 m.a. acting for ten minutes on sodium dioxide introduced previously in the nerve-canal. Oxygen, hydrogen peroxide and chlorine in statu nascendi are assumed to possess the properties required for thorough disinfection.

A revolution in root-canal treatment was accomplished in 1895 when Prof. Lepkowski introduced formaldehyde as a new remedy, that is, a 40% aqueous solution of formalin, which is obtained from methyl alcohol by allowing its vapour to pass over white-hot platinum wire. This method is still practised to-day, although it has been abandoned by its promoter, who points out the following disadvantages in connection with it: As an aromatic substance, the degree of saturation of formalin decreases during its application; a 40% solution becomes gradually a 35%, 20%, etc., solution, until it evaporates and shows only traces of formalin. It also evaporates from the root-canal and its effect is therefore, of course, but trifling. This fact may be noted when a tooth is opened which was treated some years previously with formalin. There are no micro-organisms to be found, but neither is there any formalin to be tested, even by Trillat's method by which so small a quantity as 1-20000 part can be detected. The application of formalin on cotton, an organic body which easily becomes septic, offers no surety.

It is evident that formalin was not used according to the prescription published by Prof. Lepkowski.

In his discussion with the late Dr. Symkiewicz, Prof. Lepkowski stated that the tooth should be filled at the same sitting at which it had been treated with a 40% solution of formalin. Nevertheless papers published at this period report that the dressing should be repeated until the canals become odourless—a condition which is no proof that they are aseptic.

In the formula given by Buckley the addition of trikresol is likewise valueless, for the formalin is the true spiritus movens. Unsatisfied with the results obtained by the use of formalin, the promoter of the formalin method endeavored to find out a new agent for treating putrescent roots.

This new remedy, which is known as Radicin, and has given gratifying results in 5,000 cases, is a solution of sodium hypochlorite in caustic soda. It dissolves all organic substances, destroys all micro-organisms with the exception of Koch's bacillus, dissolves the organic salts of the tooth, and leaves unaltered the inorganic spongy portion; further, it dissolves Harvard cement, Fletcher's artificial dentine, and even gold amalgam.

Radicin, which Prof. Lepkowski recommends for the treatment of putrescent pulps acts as effectively within a few minutes of being applied as the remedies hitherto used have taken weeks or even months to accomplish. The chemical action of Radicin is, to my mind, as follows: Soaps are formed from the decomposed detritus of the destroyed pulp, its fats and acids, whereas the chlorine, which is evolved in statu nascendi, sterilizes both the chamber and nerve-canals. In dissolving the organic substances, the remedy penetrates into the tooth, where it destroys the micro-organisms, and because of its uniting with water in any proportion, does not irritate the periosteal tissues. A further advantage of the preparation is that it enlarges the lumen of the nerve-canals, and thus allows of immediate filling with root pastes, while at the same time it disinfects the field of operation.

I will now describe the details of this method.

The cavity having been mechanically cleansed—by means of either excavators or burs,—and the remnants of the destroyed pulp removed, a Miller broach wrapped round with cotton-wool and dipped in Radicin liquid, should be introduced into the nerve-canals until the cotton becomes clean and odourless, with the exception of the strong chlorine smell of the Radicin. A trifling quantity of Radicin paste is then inserted and worked up to the apical foramen, immediately after which Harvard cement is introduced into the nerve-canals which are completely filled with it. The cavity above the nerve-canals is then cleaned out and filled with a permanent cement filling. As stated above, Radicin dis-

solves the cement; it is therefore advisable to cover it with two layers of cement and thus insulate it, in case of accident owing to an excess of Radicin having been used, which though rendered harmless may cause shrinkage of the filling. The same procedure is employed in those cases in which the pulp has been devitalized with a paste of arsenic or cobalt, with the difference that the pulp should first be extracted.

From the above statements it is evident that Radicin admits of immediate root treatment and filling at one sitting; it thus saves trouble, time and pain. In considering its simplicity, harmlessness, cauterisation of the gum,—lips or tongue must be avoided—and the comfort of the patient, there being no need to apply the rubber-dam, all these advantages over most other root-filling remedies show the value of Radicin, and my aim in writing is to make the preparation known to my colleagues.

There is one point which is of great importance to the dentist, considering how costly are the instruments which he uses. I have stated that nerve broaches are used in applying Radicin. Well, when these nerve broaches are covered with detritus, it is difficult to clean them without destroying the barbs, but they can be made perfectly clean and aseptic by being dipped in Radicin liquid for several minutes, rinsed in water, and dried in alcohol. They are then again quite fit for use. Those operators who have been in the habit of cleaning nerve broaches by dipping them in pure sulphuric acid and caustic soda will find the above hint most valuable in practice.

I should like to state, in conclusion, that teeth which have been treated with Radicin have proved to be sterile on being opened after two years, as was proved by a long and careful series of bacteriological examinations.

A REVIEW OF DENTISTRY IN CANADA DURING THE PAST YEAR.

The year of 1911 may well be said to have been of more than passing interest. It brought forth its usual round of big and little tasks—perplexities and vexations. It also produced its moments of success and triumph. The ranks of the profession have suffered at the hands of the grim reaper in various parts of the Dominion; and again much new blood has been added, which always means advancement and progress.

The amendments to the Ontario Dental Act and to the School Act, the latter allowing the certificate of a Dentist to be accepted for the absence of teachers, and the jurisdiction given the College to control unprofessional conduct, will greatly tend to uplift the profession in Ontario.

The extension of the international Miller Memorial Fund into Canada marks an epoch, and is the first instance of any financial aid coming from Canada for Dental research work. The Committee having this matter in charge in Canada, have been most diligent in the prosecution of this good work.

In Toronto the establishment of Dental Departments in the Hospitals marks the turning of another milestone, and will prove of immense service to the community.

The action of the Toronto City Council in deciding to establish a free Dental Clinic and finance the upkeep of six chairs, might almost be termed advanced legislation. The Toronto Dentists who fathered this motion are worthy of the highest praise and their efforts to raise the necessary funds to equip the Infirmary are meeting with the success the object deserves. From end to end of the Dominion are reports of Dental Societies, both large and small, doing yeoman service in the spread of knowledge of the need of mouth health. Great work has been done by illustrated lectures, the spread of Dental Charts through the schools and the necessity of attention being given to the mouth, brought specially to the parents of school children and the teachers.

The great advance in the science of Prophylaxis, and the untold good emanating from it, tells clearly that the work of the

future is Preventive Dentistry. The admission by the Medical Profession of the great importance of mouth health and the fact that so little has been known about it by the physician and surgeon, also marks a new era, and brings the professions of medicine and dentistry much closer together. The eminent physician, Dr. W. P. Caven, in his address at the Academy of Medicine at Toronto, spoke clearly and decisively on this point, and his remarks should be most gratifying to the fathers of Dental Education in Ontario, as well as to the profession generally.

The struggle that has been so long drawn out between Dr. W. H. Taggart and the profession generally in the United States has about come to a close. The test case of W. H. Taggart vs. G. W. Boynton will decide the matter, and it will be a good thing for the profession when it is closed. We have heard a great deal too much of the case and feeling has run high over the dispute. On November 13th the Supreme Court dismissed the action, and allowed the defendant costs. A further hearing will, however, be given in January, without additional evidence being submitted.

The Practitioners' Course held in September at Toronto was one of the features of the year in Ontario, and it is to be hoped will be made at least a bi-annual fixture.

To sum up—the features of the year may be briefly stated: Canada still leads in maintaining a four-year course in our Colleges. A tremendous advance has been made in the education of the public, and the public is becoming intensely interested. Improved legislation has been enacted in some of the Provinces, and has stood the test of the courts.

The Medical Profession has wakened up to the need of more attention to the oral cavity, and has admitted the pre-eminence of the Dentist in this regard, and has thereby brought the profession of Dentistry to a higher standard. The profession is united from end to end of Canada, and the different associations are strong and active.

Let the success of 1911 be only a harbinger of greater and more successful issues to be achieved in 1912, and Dentistry will make real history within its ranks. A word of caution has been

voiced by some of the wisest of the profession regarding what has been termed "the thin edge of commercialism in dentistry," and has been expressed in this way.

Notwithstanding the high qualifications necessary to become a Dental Surgeon, and the strict and arduous course at our colleges, the science of dentistry shows undoubted signs of too great a spirit of commercialism. This spirit is a growth, and not the result of any defined line of policy or teaching by those having to do with the training of the embryo dentist. Unconsciously, however, the evil has crept in. Assistance has been given it by some of our dental literature, giving undue prominence to the money-making feature of dental practice. If dentistry is ever going to be one of the learned professions, it must thrust from it the principle of selling dentistry to the public. The ethical dentist is more interested in the improvement of his own work and the greater service he may render his patients than in studying so-called selling service talks, and the price he is paying for his materials. To be ethical a dentist must be successful, and pay his way as he goes, and to do this, he must render the highest service to the community, and the adjustment of his fees will naturally follow.

START THE NEW YEAR RIGHT

One of the best beginnings for the New Year is to open a trading deposit account. The amount you will save if you purchase on this plan during the year will surprise you.

Send us	\$100.00	and receive credit for	\$111.11
"	90.00	" " "	100.00
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Your subsequent purchases will be charged up to these amounts.

Bear in mind that the above amounts in your Savings Bank yield only a fraction of our returns to you. Your money is safe with Ash & Sons, and you will have the most varied stock in Canada to select from.

Second-Hand Goods

1 Harvard Mechanical Chair, good condition	\$70 1 00
1 Columbia Chair, Maroon Plush, in excellent working order. This Chair is in Maritime Provinces	70 00
1 Ritter Cable Engine, 110 Volts, Direct Current, Fair Condition	35 00
1 Davis Gasometer, less Face Piece and Tubing, Excellent Condition	18 00
1 Pelton No. 1 Furnace with Pyrometer, A-1 Condition..	65 00
1 Cabinet, No. 57, American Cabinet Co's, in A-1 Condition	65 00
3 Elgin Casting Machines, practically new, each	25 00
1 Clark Cabinet, Golden Oak, Good Condition, Medicine Top, Swinging Trays	35 00
1 Harvard Mechanical Chair A 1 Condition }	80 00
1 Hall Bracket and Table	

WE INVITE SPECIAL DEPOSIT ACCOUNTS.

A cash deposit of \$100.00 to apply to general merchandise, entitles the sender to a discount of \$11.11.

A cash deposit of \$50.00 entitles the sender to a discount of \$2.50.

A cash deposit of \$25.00 entitles the sender to a discount of \$1.25.

Why not send us a deposit NOW.

FOR SALE

Dental Practice—Town of Barrie, Ont., Office of the late Dr. MacLaren, satisfactory terms for quick sale. Apply Claudius Ash, Sons & Co., Toronto, Ont.

Two Excellent Moose Heads—Beautiful specimens. Well mounted. Ideal for decoration purposes. A bargain, \$50 each.

Dental Practice—In thriving Town 100 miles from Toronto. Good opening. Apply Ash & Sons.

Contents of Toronto City Dental Office—A bargain. Apply Ash & Sons.

Dental Practice Niagara Peninsula, Apply Ash & Sons

WANTED

Situation—By an experienced non-graduate, as Dentist's assistant. Apply Ash & Sons.

A BARGAIN



We have on hand this fine Cabinet, absolutely new and without blemish. Complete with Medicine top; all finished in Golden Oak.

Price \$225.00

For a Quick Sale we will accept 190.00

With 10 per cent Discount for Cash

CLAUDIUS ASH, SONS & CO., Limited

Ash's Dental Rubbers

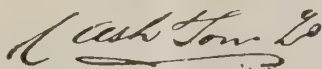
UNAPPROACHED FOR

Excellency, Purity, Strength, Elasticity
and Density.

To mark the genuineness of our Rubbers, the face of every box and envelope which we supply bears this signature and monogram—



and one of the pieces of cloth in which each sheet of rubber is packed bears this signature—



in addition to the name of the Rubber.

Always ask for ASH'S when ordering Dental Rubbers.

For full list of our Dental Rubbers showing NEW and REDUCED prices, see next page.

IMPORTANT

We have drawn the attention of the profession for months past to the fact that we give full **16 OUNCES** of Rubber **TO THE POUND**, exclusive of the linen backing. We have also stated that **MOST** American manufacturers **DO NOT** give 16 ounces to the pound. We now state that consequent to the agitation in America, demanding full weight and measure, these manufacturers to protect themselves from the law are omitting to mark the weight of rubber on their containers. Is our claim proven?

Ash's Dental Rubbers

From September the following prices will apply on our
Dental Rubbers.

NOTE.—Our Rubbers weigh 16 ozs. to the pound, exclusive of linen backing and box.

FOR COATING

	Per lb.	5-lb. lots	10-lb. lots	20-lb. lots
New Pink, Medium.....	\$6.00	\$5.40	\$5.00	\$4.75
No. 1X Pink, Medium.....				
No. 1 Pink, Light.....				
Gum Pink, Medium.....				
Gum Pink, Light.....	5.00	4.50	4.25	4.00
No. 2 X Pink, Medium.....				
English Pink, Medium.....				
English Pink, Light.....				

FOR BASE

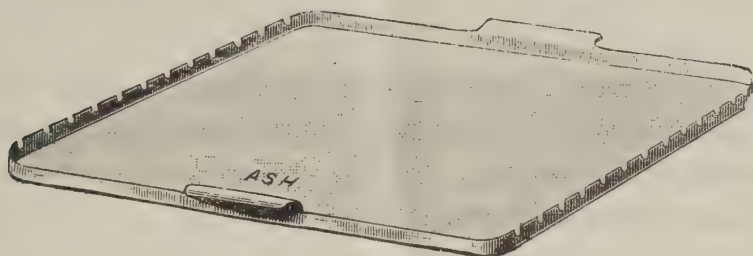
Improved Black.....	4.25	3.80
Combination.....		
White for Side Blocks, etc.....		
Child's "G".....		
A. E. Elastic, Dark Brown.....	3.75	3.35
W. Elastic, Dark Brown.....		
Whalebone No. 1, Dark Brown.....		
Whalebone No. 2, Light Brown.....		
Solid Base.....	3.30	2.97
Dark Red.....		
Flexible Base.....		
Dark Elastic.....		
Maroon.....	2.75	2.45
Red.....		
Orange.....		
Dark Brown.....		
Brown.....		
English Base.....		

SPECIAL—FOR TENDER GUMS, ETC.

	Degrees Fahrenheit	H.	Time M.	lb.
Soft Pink, for lining Palates.....	310	1	15	\$6.00
Soft Dark Red.....	310	1	15	4.25
Vela for Artificial Palates.....	270	6	0	6.00
Brown Weighted				4.25
Pink Weighted				6.00
Brown Repairing				4.75
Pink Repairing				6.00

NOTE.—Cash Discounts do not apply on quantity rates on our Coating Rubbers in any quantity over 5 lbs.

White Enamel Tray

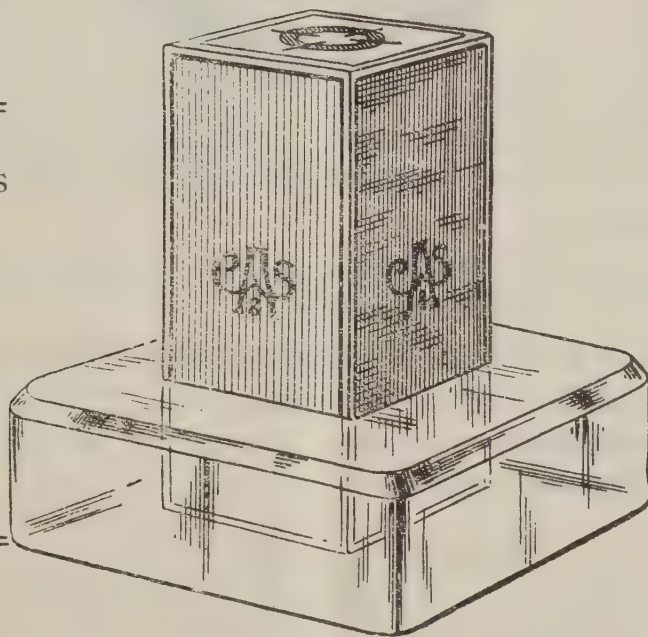


This Tray covers the Allan Table. It is readily removed, and the used Instruments can be carried to the Sterilizer in it for cleansing.

Price - - \$2.00

Ash's Cardboard Cartons

To fit Ash's
or other
makes of
Metal or
Glass
Bases.



Per pack-
age of 50,
50 cents.

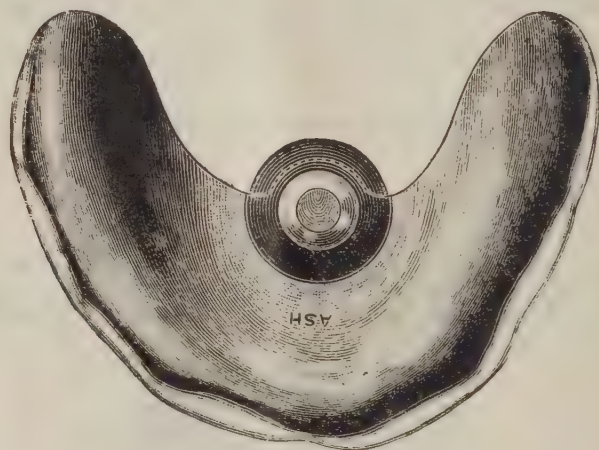
CLAUDIUS ASH, SONS & CO. Limited

RAUHE'S IMPROVED SUCTION DISC FOR VULCANITE DENTURES.

(Patented in England, Germany, France, Austria-Hungary, Belgium, the United States, Etc.)

Rauhe's Suction Disc has been specially designed to prevent injury to the palate. It does not draw down the tissues and produce soreness in the mouth. In this respect it is greatly superior to all existing Suction Discs.

There are no parts about it which can be lost or misplaced, such as bolts, or screws, etc.



It is easily kept clean, owing to the fact that the rubber disc can be removed and replaced in a few seconds, without the use of a tool of any kind.

The anchorage of the rubber disc is so simple that the patient can renew the disc when necessary.

The suction power of the disc is sufficient to hold a denture quite firmly and securely in position.

It is unnecessary to add clasps to partial sets which are fitted with Rauhe's Suction Disc.

DIRECTIONS FOR USE:

Press the disc on the most suitable part of the plaster of Paris model with the thumb, fasten it in position with the three small pins which are supplied with it, being careful to drive the heads right home, and pack the hole in the centre with dental rubber. After the case is packed and vulcanized, strip off the tin form in

which the stud is embedded; the portion in which the pins are driven should be removed first. To facilitate removal, cut through the tin, open it with a pocket knife or suitable tool, and strip it off. Should the edge of the stud be bent in stripping off the tin form, it can readily be straightened with any blunt tool. When the stud is thus cleared of the tin form, slip a rubber disc over it and the Suction Disc is ready for use. To do this, the rubber disc should be held down with the thumb of the left hand and stretched over the stud with the thumb and forefinger of the right hand.

In regard to the position in which the Suction Disc should be set on the plaster of Paris model, it will be obvious that the flattest part of the palate should be chosen. Two Suction Discs should be used on exceptionally high palates and on V-shaped palates—one on each side. In the case of large palates it is desirable to set the Suction Disc as far back as possible.

Sometimes the full power of the Suction Disc is not immediately exercised when it is first put into the mouth, but after it has been worn for some time its action will be perfectly efficient.

SPECIAL—To remove the collar from beneath the stud, after the case is vulcanized, insert the point of an excavator in the slit exactly opposite the letter C in the name C. Rauhe and open it out gradually, without levering it up, so as not to injure the stud.

PRICES.

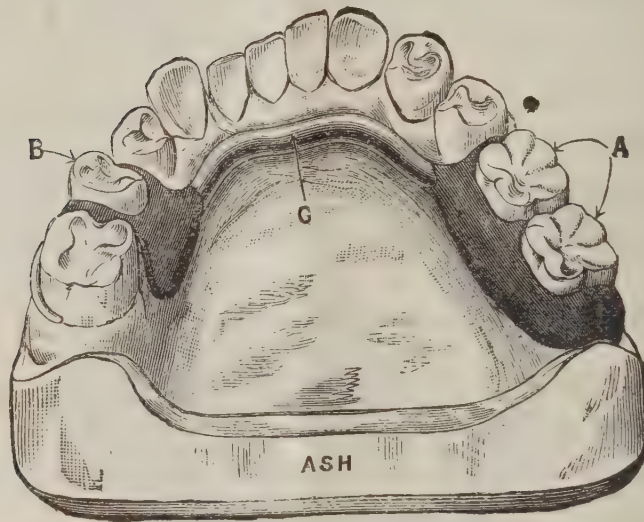
Rauhe's Suction Discs for Vulcanite Work:

Gold Stud with 3 India-Rubber Discs.....	each	\$ 1.00
	per doz.	11.25
Aluminum-Alloy Stud with 3 India-Rubber Discs	each	.50
	per 1½ doz.	2.50
Extra India-Rubber Discs, any size.....	per doz.	.30

CLAUDIUS ASH, SONS & CO., Limited

SOLE AGENTS

ASH'S OVAL GOLD CASED WIRE For Bar Lowers



Bar Lower Dentures have come into universal demand. Note some of their advantages.

No tendency to push teeth outwards.

Greater cleanliness.

Less bulk.

Greater rigidity.

Per dwt.....\$.40

CLAUDIUS ASH, SONS & CO. Limited

HAVE YOU EVER

examined the quality of your cast inlays, bridges, or cast Aluminum dentures when made by any other method than superheated steam?

We would like the opportunity to demonstrate this important point to you.

The Solbrig-Platschick Press

gives you cast gold and Aluminum of the texture of the beaten metal. No Brittleness. No pitting of Aluminum.

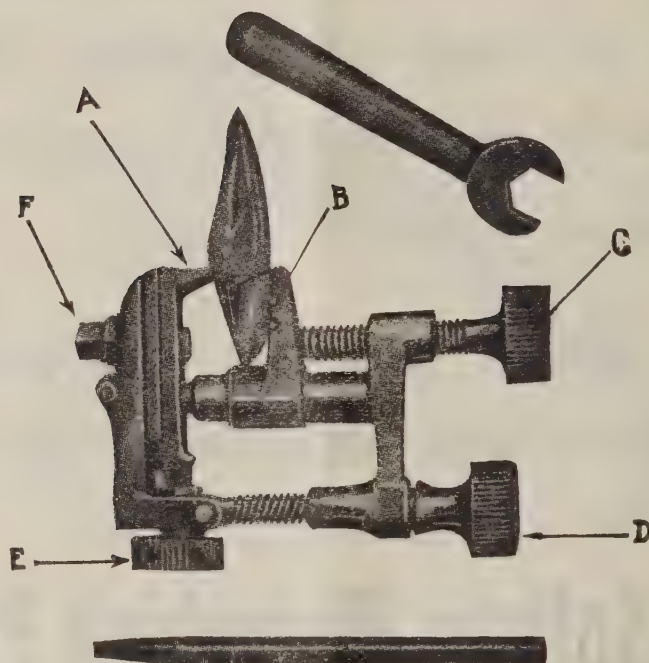
Write us for information; it will cheerfully be given.

Claudius Ash, Sons & Co., Limited

Mosley Crown Remover

An Ideal Appliance for Removing
Crowns from Roots

Registered.



Natural Size.

The Mosley Crown Remover is the only instrument yet devised for removing Dowel Crowns from the mouth. Its primary object is to remove these crowns without in any way injuring the root. This is accomplished quickly and painlessly. In most cases the crown remains uninjured and can be used again if desirable.

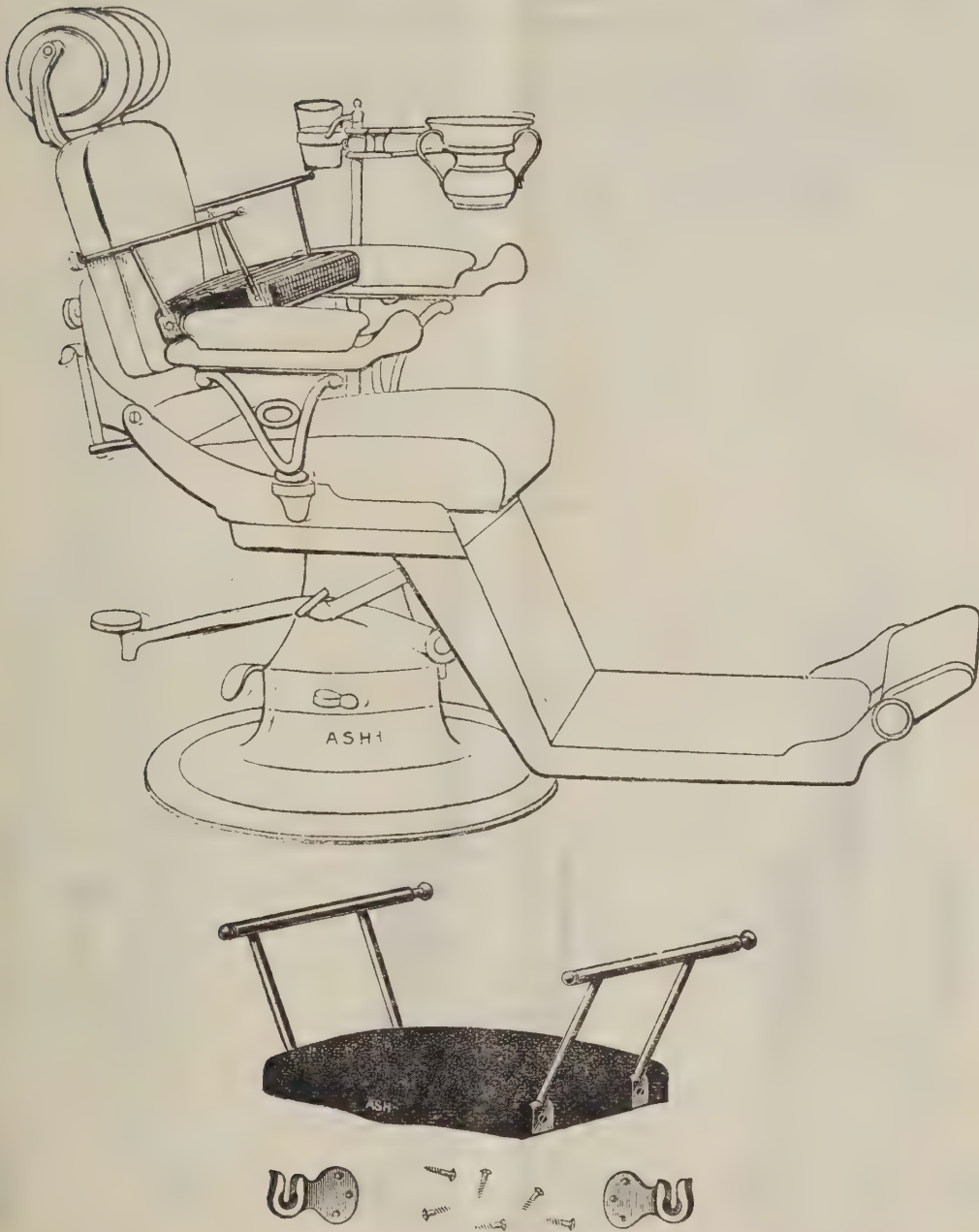
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|-------------------|----------------|
| A. Wedge Tongues. | D. Thumb Screw |
| B. Vice Jaw | E. Thumb Screw |
| C. Thumb Screw | F. Jam Nut |

Complete directions with each Remover.

PRICE = = \$5.50

Claudius Ash, Sons & Co., Limited

Child's Seat For Dental Chairs



The Child's Seat is shown separately and attached to chair. It is quickly detached and will be found a boon to many offices.

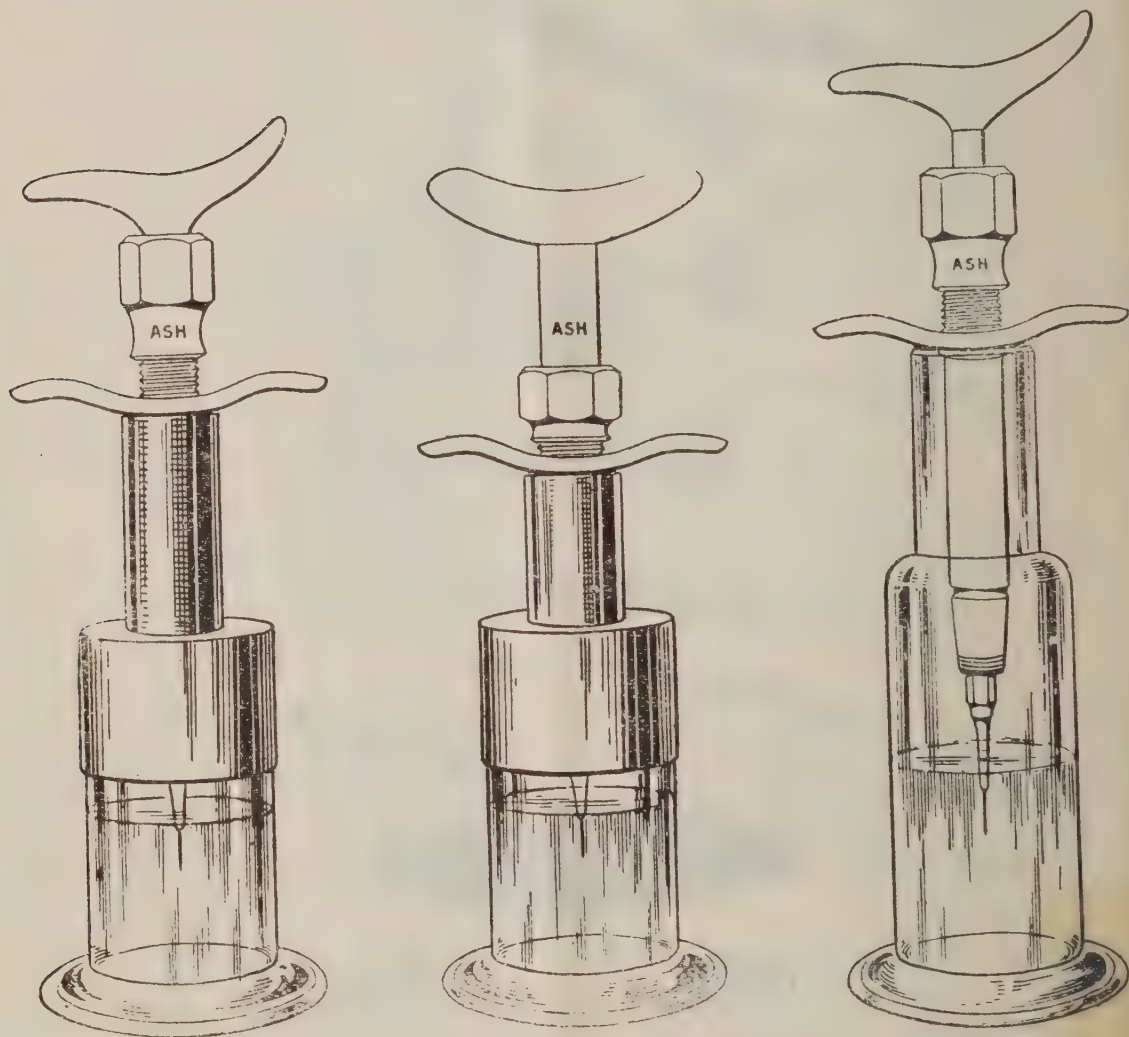
Upholstered in Dark Green Leather, \$8.00

CLAUDIUS ASH, SONS & CO., Limited

Save your Hypodermic Needles

Nothing aggravates the Dentist much more than to take up his Syringe after his last operation and find it "plugged." He finds that he has laid it down after using and it has quickly rusted. His time is too valuable to waste drying the needle out. All this annoyance is saved by the

Bardet Syringe Sterilizer



Keep your needle on your Syringe in the Sterilizer immersed in Lysol. Your needle will never rust, is kept in a sterile solution, is always ready to hand and looks well on your table.

In neat Cardboard Boxes for Mailing, 60c. Each.

CLAUDIUS ASH, SONS & CO., LIMITED

GALLOWAY'S SUCTION DEVICE

FOR LOWER DENTURES ONLY

Patented in United Kingdom and U.S.

Other Patents Pending.

This Suction is the most satisfactory ever offered. It consists of a curved metal bar, which has counter sunk holes in it for four pins to secure it to a plaster model, and a vulcanized strip of Ash's specially prepared Vela Rubber which so well withstands the oral fluids.

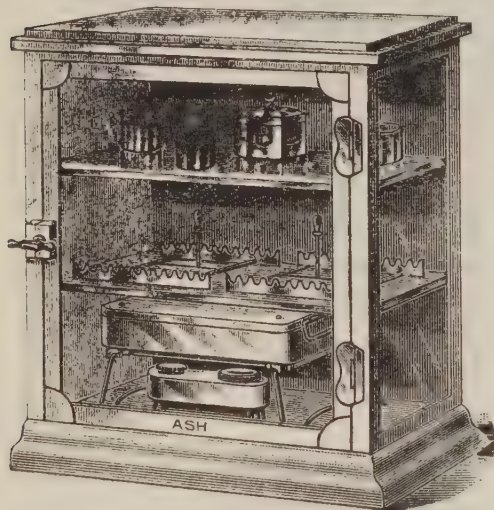
This Rubber Strip is held in position in the denture by the suction which is produced by the small holes on the curved surface and to the gum by the suction through the larger holes on the flat surface. The Strip can be removed and cleansed, and replaced in half a minute.

The device is cleanly and secures the denture properly without any discomfort to the patient.

PRICE \$1.00

Sole Agents—

Claudius Ash, Sons and Co., Limited



ASH'S No. 4 ASEPTIC CABINET

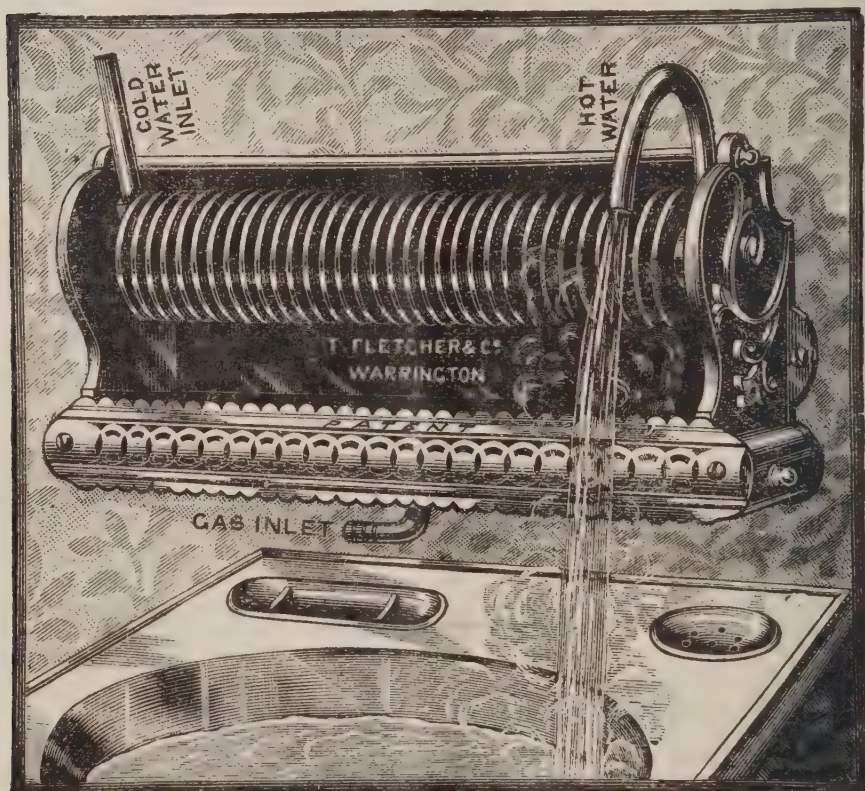
With Metal Back and Metal Frame Enamelled White; Glass Front and Sides and two Plate Glass Shelves.

Dimensions: 17 in. high, 12 in. wide, 8 in. deep.

From these measurements it will be seen that this Cabinet is a convenient size for standing on a mantelpiece, an ordinary shelf, or a table. It is of British manufacture, strongly made, and well finished. It will hold a good number of instruments and sundries.

Price, empty	\$12.00
With word "Sterilizer" in gold.....	13.00

INSTANTANEOUS WATER HEATER



Gives a steady stream of nearly boiling water. A $\frac{3}{8}$ -inch clear bore gas supply is sufficient for the heater.

Price	\$14.00
Price, N.P.....	16.00

Aluminum for Casting

If you want the Best Aluminum Specify

“ASH’S”

If you have not already used Ash's 99 per cent Aluminum or Ash's Aluminum Alloy, send in a Mail Order now.

We have many unsolicited testimonials from one end of Canada to the other.

One of our customers writes:—“Send me 20 packets Ash's Aluminum Alloy for casting metal plates. **I find this good.**”

PRICES

Aluminum Ingotsper lb. \$1.50

Aluminum Ingotsper half lb. 0.75

Aluminum Alloyper pkg. 0.65

Claudius Ash, Sons & Co., Limited

Here's a good thing in Alloy

Ash's Popular Amalgam

Consequent to a steady demand for a lower priced Alloy than C. A. S. Amalgam, we have spent a great deal of time on the production of an Alloy that would be high in its proportion of silver, have great edge strength and hold its color in the mouth. We can confidently state now that we have what you have been looking for in

Ash's Popular Amalgam

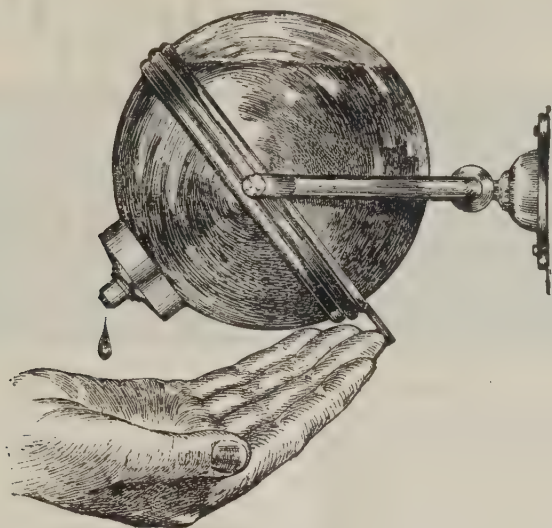
\$1.00 Per Ounce

5 Ounces for \$4.50

Ask our Travellers about it or better still, sit right down and send us a MAIL ORDER now. The price is certainly attractive and the guarantee of the oldest house in the world protects you.

SEND US YOUR ORDER.

Claudius Ash, Sons & Co., Limited



THE ONLY ASEPTIC WAY OF USING SOAP

Is by means of the BEAU BRUMMEL LIQUID SOAP DISPENSER, the only mechanically-perfect, successful device which furnishes a measured quantity of absolutely uncontaminated soap from a practically air-tight dispenser, each time it is used.

Embellishes the washstands, eliminates soap waste and mussy soap dishes. Requires no care and attention.

As for the soap itself, we have perfected practically a neutral soap, which being prepared from pure vegetable oils, is the purest form of soap that can be had, free from acids, animal fats and tallow, and it is not only a better detergent and cleanser than cake soap, but is an emolient to the skin, refreshing, stimulating and invigorating.

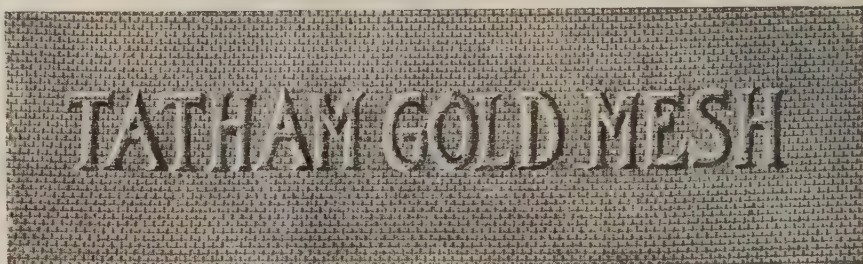
The Beau Brummel Liquid Soap System is the only one whereby the Dentist can assure absolute asepsis in using soap, in his offices.

Prices: Holders	\$3 50
Soap, per Gallon.....	3 50

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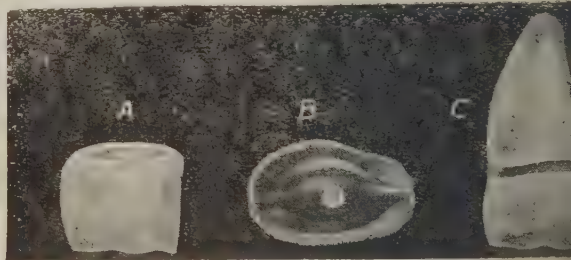
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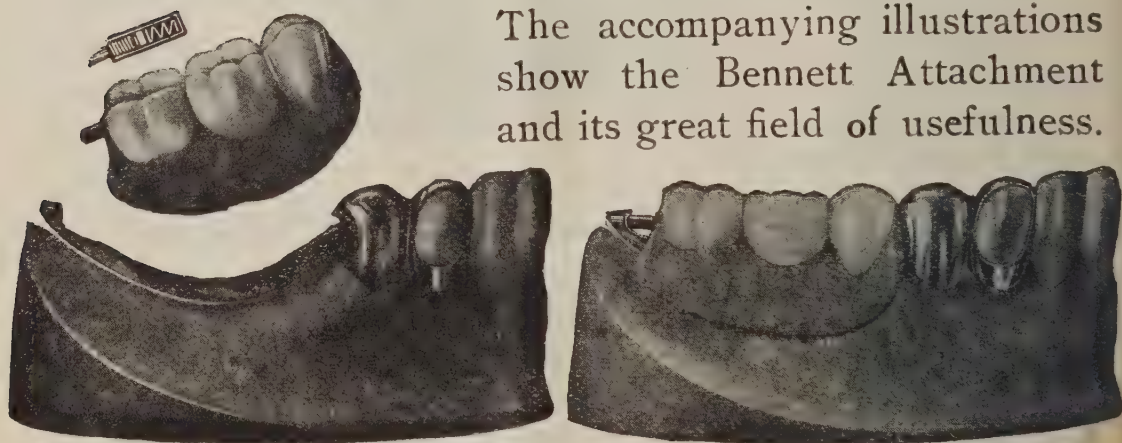
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ASH'S Canadian Monthly Circular

Issued from Toronto on the First of each Month

VOL. II

MARCH, 1912

No. 6

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Second Hand Goods.

Advertising Section.

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The quality and finish of these trays cannot be excelled.

Set of 12, Selection "B" - - - - - \$5.00

Claudius Ash, Sons & Co. Limited

Ash's Canadian Monthly Circular

VOL. II

TORONTO, MARCH 1, 1912

No. 6

TREATMENT OF ALVEO-DENTAL PYORRHEA.

BY DR. MENDEL-JOSEPH, Professor at the Dental School of Paris.

We know that a rational indication in therapeutics ought to be the result of patient and methodical work in analysis and synthesis. First of all, the study of the etiological conditions of the morbid process is of preponderating importance for the fixing of therapeutic action; then there must be reconstitution of the successive phases of the pathogenic evolution, as well as the representation of the lesions of the tissues and the organs; and, finally, the minute observations of all the details and of all the symptoms which reveal the malady in its multiple and diverse modes.

From this ensemble of our knowledge it is necessary to gain a general idea from which we can find the directing principle for our intervention.

Is it possible, in the present state of our knowledge, to apply the same method to the treatment of alveolar pyorrhea? We are obliged to answer this question in the negative. We may, in fact, say that the etiological factors of this affection are completely unknown to us. Hence we do not know the essentials of the pathogenic mechanism. We are a little better acquainted with the microscopic lesions, thanks to Malassez and Gallipe, who have given us the description of a case of pyorrhea observed in the cat, and also thanks to the last work of Hopwell-Smith, which appeared in the last number of the Dental Cosmos—a work, however, that is not yet complete. In regard to the bacteriological researches, while they show us the principal varieties of the micro-organisms which we find in pyorrhea, they give us no precise indication of their role and their etiological value.

The only things that we truly know are the clinical manifestations so often described by authors and known by daily observation.

We perceive, without difficulty, that under these conditions we cannot do other than apply symptomatic dental therapeutic treatment, which no doubt is provisional and temporary, but practically very satisfactory.

In order to unite the maximum of the elements of success, we must remember that very often pyorrhea is only the expression of a local episode in the course of a general trouble of the organism, and that it is necessary to add to the local treatment a medication which has for its object the modification of the general condition of the patient. I would especially draw attention to the good results which I have obtained by the suprarenal and thyroidian treatment. I hope to have an opportunity of speaking to you on this subject in a more complete manner. To-day, I will limit myself to the purely local treatment.

The local therapeutic indications may be thus summarised:—

(a) Suppression of every mechanical cause of irritation, every traumatism, permanent or intermittent, capable of effecting the gingivo-alveolo-dental region.

(b) Sterilisation of the purulent areas.

(c) Methodical evacuation of the pockets and excitation of the nutritive movement of the region.

Let us look at each of these propositions.

(a) The suppression of the factors of mechanical irritation is accomplished partly by the removal of the tartar, and partly by the reconstitution of the normal relations of correct occlusion, so as to remove all traumatism in the complex act of mastication.

It is useless to speak to you at length upon the removal of the tartar—a classical operation, and of preponderant importance in the particular case. You all know what minutiae, what delicacy and what patience are required, and that very often, in order to execute it with all the care desirable, the aid of local anæsthesia becomes necessary. I will deal more with the means destined to prevent or to correct the difficulty of occlusion.

At the beginning of the disease, when the teeth scarcely indicate a tendency to deviate, I oppose the tendency in the following manner.

I construct for this purpose, a very light apparatus formed of a plate in black vulcanite adapted to the lingual surface of the teeth and of the neighboring alveolar region, and continued outside with a thin wire of rigid platinum which is exactly contoured to the jugal and labial surfaces of the teeth. The dental arch in this manner is made conveniently immovable. The patient wears the apparatus regularly at night and, if possible, in the daytime. It goes without saying that buccal hygienic care is here, as always, rigorously indicated in the treatment of this affection.

In cases in which the teeth are already deviated, I commence to bring them into their initial position by fixing them either with immovable appliances or with a plate of vulcanite which bears wings of gold, placed in such a manner as to sustain the loose teeth on each side.

The gaps due to extractions made anteriorly are rigorously filled, conformably to the rules of the normal occlusion. Bridges in such cases are, for choice, the best means to employ. Finally, I have obtained excellent effects by grinding the too prominent cusps or tubercles of teeth which are ever so little loose. With the aid of articulating paper I bring into evidence all the points normally prominent, and I level them down carefully with the wheel. I consider that the urgency and utility of this operation cannot be exaggerated. The teeth subject to this affection are nearly always displaced in a condition of extension, which, although little appreciable at the outset, is revealed upon close examination, and represents a condition of a particularly troublesome irritation.

(b) Sterilisation of the purulent areas.

This is one of our dominant preoccupations. The means of accomplishing it are numerous, and it would be too long to enumerate them. I will speak of the one which I utilise, and which gives me the best results.

Since the researches which I made at the Pasteur Institute upon the antiseptic action of zinc, introduced electrolytically, the results of which were communicated to the Academy of Sciences, I have often had occasion to employ this agent in the treatment of stubborn suppurations, and notably in pyorrhea. The great advantage of this procedure lies in the fact that, in lieu of acting upon the surface, as do the ordinary antiseptics, it permits us, on the contrary, to penetrate into the depths of the tissues as deeply as we desire: it is a question of time and of the intensity of the current. The following two experiments will give you a clear and exact idea of the mode of action of this agent.

Here is a test tube which contains a centre of ordinary culture-broth solidified by gelose. This centre encloses about from 8 to 9 per 1,000 of NaCl, which in this instance corresponds to the contents of the normal humours of the organism. Upon the inclined surface of the gelose, in its upper portion I apply a positive electrode formed of a plate of zinc about 2 mm. wide, and a negative electrode of platinum below the surface, quite close to the bottom of the tube. I pass a current of from 2 to 3 milliamperes for ten minutes. I observe that at the level of the point of application of the positive electrode, a whitish opaline zone is developed, which increases progressively in its surface and in its depth according as the current passes. At the termination of the experiment, this zone occupies an extent of from 4 to 5 cm. and shows clearly upon the transparent floor of the gelose. At the level of the negative pole no apparent modification of the centre is shown, but simply an abundant giving off of hydrogen.

If I now sow the entire surface of the gelose with a culture of any bacterium—golden staphylococci, for example—I shall find, twenty-four hours afterwards, that the region affected by the electrolysis has remained sterile, while the rest of the surface of the nutritive centre is covered with abundant colonies.

This experiment has been repeated with different micro-organisms—micrococcus aureus, streptococcus, bacillus anthracis, and, above all, bacillus, the extreme resistance of which is known to bacteriologists.

What, then, has happened? Under the influence of the electrolysis the zinc element is ionized. The zinc ion—that is to say, the smallest fraction of this body susceptible of entering into combination—is liberated. In the presence of the chloride of sodium contained in the nutritive centre it lays hold of the chlorine ion in order to form chlorides and oxychlorides of zinc, which are deeply diffused in the culture and sterilise it.

This is what we learn from the experiment in vitro.

Now let us see what passes in vivo.

Here is a guinea pig or an adult mouse. The two flanks of the animal are depilated to an extent of about 5 square cm. Upon the surface thus laid bare I introduce into the subcutaneous cellular tissue a needle of zinc, which forms the positive electrode. I apply the negative electrode upon the opposite flank. I pass a current of from 2 to 3 milliamperes for ten minutes, and this is what we observe. All around the needle concentrically there is developed a whitish opaline patch, which increases in extent according as the current passes. At the expiration of ten minutes this patch occupies an area as large as a 50-centime piece.

On the next day the aspect of the patch is modified. It is larger, of a vivid bright red, varnished, clearly delimited. All around, a trench of demarcation is drawn, and accentuated during the following four or five days. Towards the sixth day a scab commences to develop in places, which little by little covers the entire patch. Towards the tenth day the scab begins to become detached: on the fifteenth day the new skin is completely re-formed. The hairs will soon appear, and a remarkable thing is that they grow much longer at this point than at any other place. This last result has already been found by Prof. Leduc, in his experiments with electrolysis.

This is not all. If upon the surface which has undergone the action of electrolysis we rub a platinum needle charged with a culture of golden staphylococci, we are not able to contaminate it: whereas, all round, upon the healthy skin, I have been able by this procedure to cause the formation of furunculi.

This second experiment corroborates and completes the first. It enables us to study the different organic relations which follow

upon electrolysis. The tissues touched by the ion of zinc are, as in vitro, rendered sterile: but their structure is disorganized. They are the seat of violent reactions, to which their extreme redness bears witness. There is here established an intense circulatory and nutritive activity, the object of which consists of eliminating the disorganized tissues and of repairing the breach thus produced. During the whole of this work the flesh is at "the quick", but no contamination whatever has been produced. Finally,—and this is an important detail—a healthy and vigorous tissue arises and replaces the destroyed and eliminated portions.

These different properties of electrolysis appear to me altogether favorable for the treatment of pyorrhoea. In a centre like the buccal cavity, where the causes of affection permanently remain, the means which act exclusively upon the microbe are evidently insufficient; a short time after their application the pockets are invaded anew by numerous colonies of bacteria.

But there is more. In this affection, with chronic evolution, slowly progressive, the microbial element has invaded the different tissues to a great depth. The spongiöse structure of the alveolus procures for it secure lurking places where the injections and the cauterisations on the surface cannot reach it. Electrolysis, on the contrary, by producing a centre unfitted for the vegetation of pathogenic germs, by destroying the tissues which are deeply infected, and by insuring an aseptic elimination, appears to me to offer important advantages.

As to the method of operation, it is of elementary simplicity.

An apparatus with continuous current being ready, I commence by carefully washing out the purulent pockets and injecting therein a 3 per cent. solution of chloride of zinc which has previously been boiled. The injection ought to be carried out with a minimum of pressure. This done, I introduce, as far as possible, between the loose gum and the root, a zinc electrode formed of a plate wire-shaped at the end, which I tie to the positive pole of the electrogenic source. I attach the negative electrode to the dorsal surface of the hand and allow a current of from 3 to 5 milliamperes to pass for ten minutes.

As a result of this treatment the patient feels a painful sensitiveness in the whole region affected by the electrolysis—a sensitiveness which persists for a dozen hours, and which gradually becomes less. The next day and the days following we perceive a congestive condition of the gum. The suppuration only diminishes little by little. Ten days later I carry out a new application which this time is less painful. The third sitting ought to take place at the end of fifteen days, and the duration of the application and the intensity of the current should be varied according to circumstances and to the sensitiveness of the patient.

I have now arrived at the third indication formulated:—

(c) The methodical evacuation of the purulent pockets.

We have seen that the elimination of the tissues subjected to electrolysis is only slowly effected. It is necessary, therefore, to aid this action. To this end I utilise massage.

In order that the massage may have a maximum of efficacy it is necessary to practise it frequently, and for several months. To save my patients many visits, I recommend them to practise the massage themselves. It ought to be performed twice per day, in the morning and in the evening. Every such operation should last from three to five minutes.

The finger having been covered with vaseline, the patient brings it as far as possible towards the apical region, and from there allows it to glide towards the neck of the tooth by exercising gentle pressure at first, and increasing it towards the end of the operation. The internal region ought to be as carefully massaged as the external or jugo-labial region. I cannot insist too much upon the importance of the action of the massage carried out by the patient himself under the conditions which I have described, for I attribute to it a great part of the total success in the treatment.

Ash's Dental Rubbers

Are the best in the world and are the standard by which all others are judged.

NOTE.—Our Rubbers weigh 16 ozs. to the pound, exclusive of linen backing and box.

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	Per lb.	5-lb. lots	10-lb. lots	20-lb. lots
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Gum Pink, Light.....	5.00	4.50	4.25	4.00
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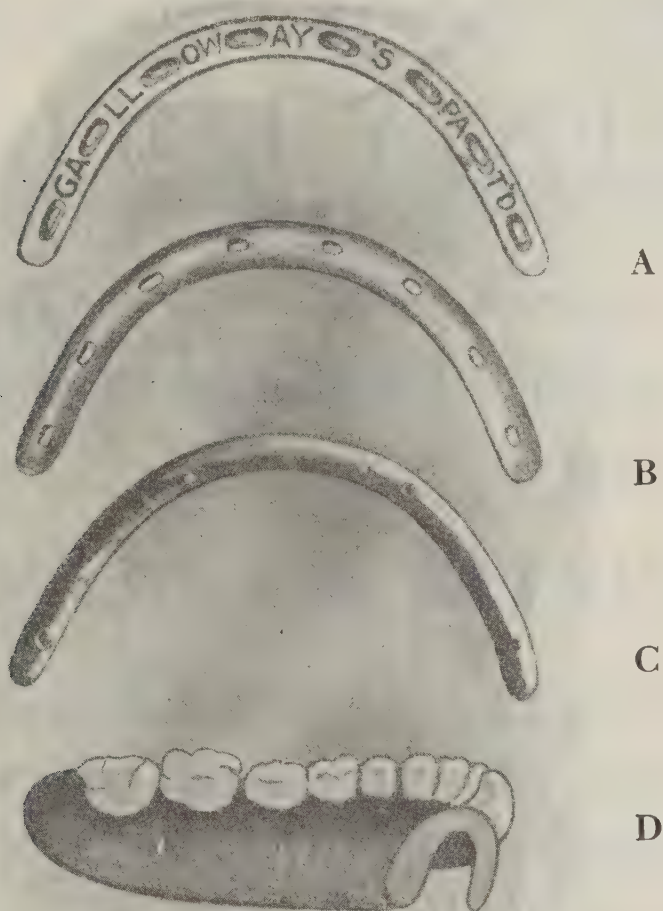
The device is cleanly and secures the denture properly without any discomfort to the patient.

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Sole Agents—

Claudius Ash, Sons and Co., Limited

GALLOWAY'S SUCTION DEVICE FOR LOWER DENTURES ONLY—continued.



 Natural size.

A and **B** show the flat and rounded surfaces of the rubber strip and the holes which serve to retain the denture in position in the mouth.

C—Metal bar with countersunk holes into which the heads of the pins should be firmly pressed.

D—Vulcanite blank which shows the rubber strip in position.

Price.....\$1.00 each

SOLE AGENTS.

CLAUDIUS ASH, SONS & CO., LTD.

Let us send you a nice Case
of two hundred Dowel Crowns

TWENTY DOLLARS

You cannot get one hundred of
any other reputable Crown for
less than

NINETEEN DOLLARS.

Added to this, Ash's Mineral Body
of which all our teeth and crowns
are made, is the only body that can
be successfully polished after grind-
ing.

Our Moulds are the most natural, and the
grinding surfaces are better than on any
other make of Crowns.

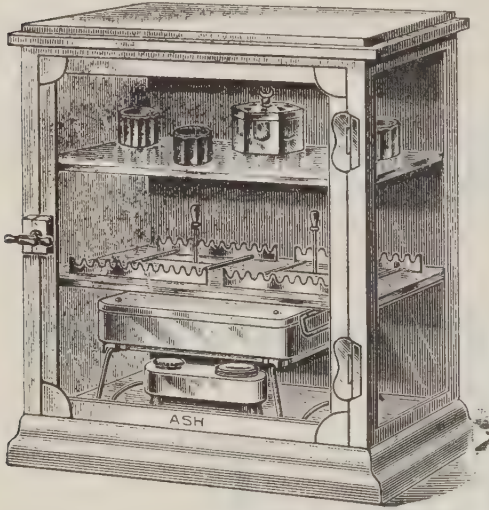
Claudius Ash, Sons & Co., Limited

New Prices for Stents Impression Compound

Per box.....	.40
6 boxes.....	2.20
12 boxes.....	4.20
24 boxes.....	6.50

This compound is the most reliable on the market, and has stood the test of time. If you have not used it, send us a request postal for a sample.

Claudius Ash, Sons & Co., Limited



ASH'S No. 4 ASEPTIC CABINET

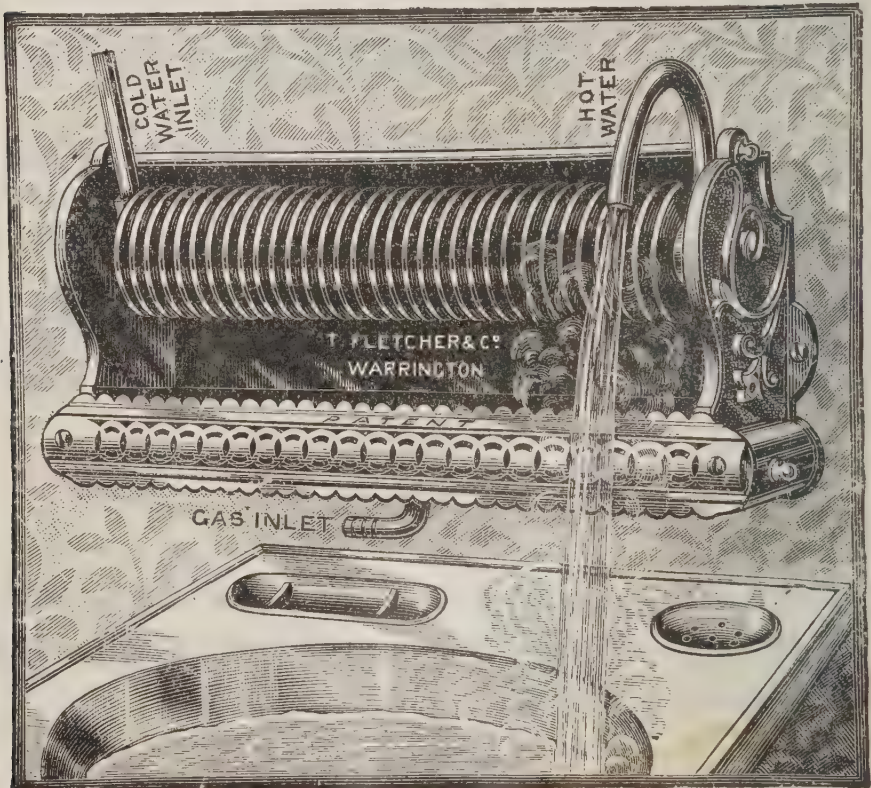
With Metal Back and Metal Frame Enamelled White; Glass Front and Sides and two Plate Glass Shelves.

Dimensions: 17 in. high, 12 in. wide, 8 in. deep.

From these measurements it will be seen that this Cabinet is a convenient size for standing on a mantelpiece, an ordinary shelf, or a table. It is of British manufacture, strongly made, and well finished. It will hold a good number of instruments and sundries.

Price, empty.....	\$12.00
With word "Sterilizer" in gold.....	13.00

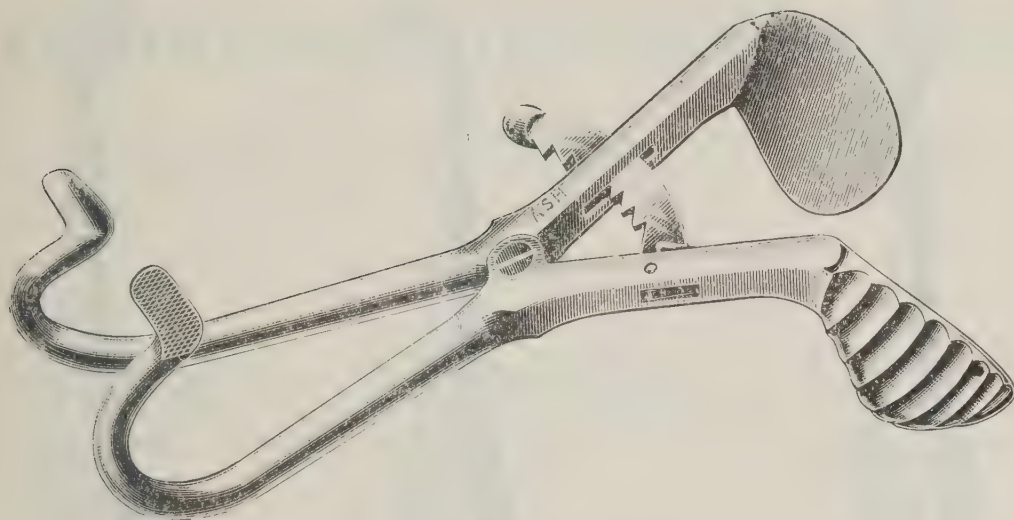
INSTANTANEOUS WATER HEATER



Gives a steady stream of nearly boiling water. A 3-8-inch clear bore gas supply is sufficient for the heater.

Price.....	\$14.00
Price, N.P.....	16.00

BUXTON'S GAG



This Gag has long been the premier article of its kind. It is strong and durable. Will retain itself in the mouth and the handles are out of the way of the operator.

In addition to being a perfect Gag, it is most useful as a mouth opener, as the beaks are so constructed that one falls below the other and they can be forced in between the upper and lower teeth.

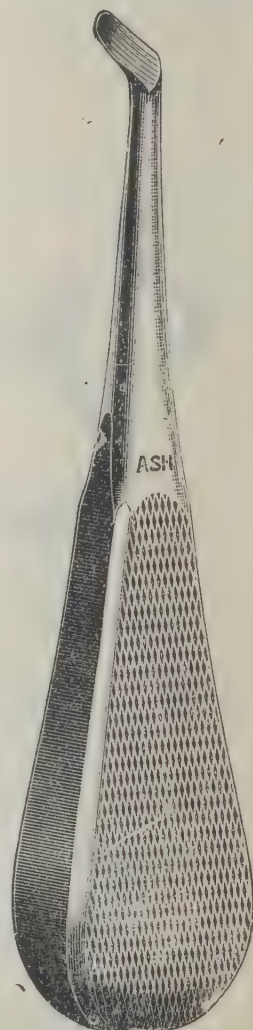
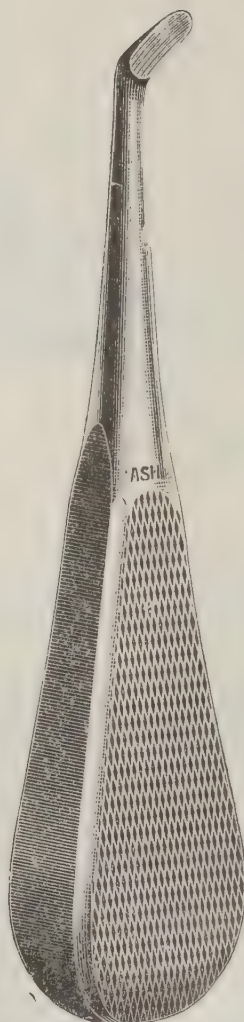
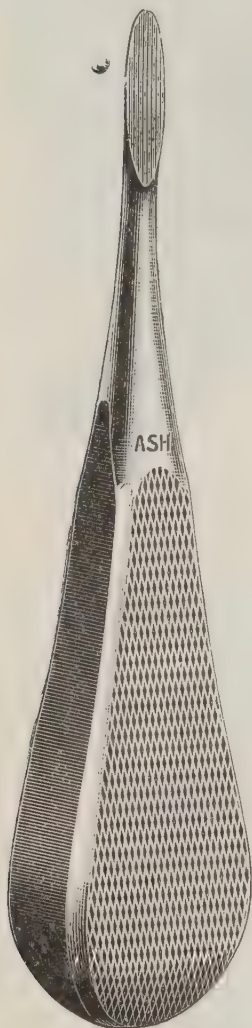
PRICE - - - \$4.50

Claudius Ash, Sons & Co., Limited

A Useful Set of Elevators

COLEMAN'S

HOSPITAL PATTERN



LEFT

RIGHT

These Elevators are capital patterns and are largely used. If you have much extracting to do you will find these Elevators most useful.

PRICES

Coleman's	-	-	-	-	\$1.50
Hospital Pattern	-	-	-	-	1.85 each
Universal Adjustable	-	-	-	-	2.25

Claudius Ash, Sons & Co., Limited

If you want to Insure Success

In the Casting of Gold Inlays and Gold and Aluminum
Dentures use

Solbrig's Embedding Material

The great amount of research work done by M. O. SOLBRIG, L.D.S., of Paris, has among other valuable results, given us the ideal in Investments. In the Embedding of large cases the most frequent cause of failure is through inability to properly surround the model, feeling certain that no air bubbles exist. Solbrig Embedding Material is mixed and poured like cream, giving absolute certainty of perfectly surrounding the model. The total absence of shrinking and cracking will delight you. It is a very open porous material, and allows a free escape of air from the mould.

Tin containing 7 lbs.	-	-	-	\$1.00
-----------------------	---	---	---	--------

Tin containing 28 lbs.	-	-	-	\$3.50
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Claudius Ash, Sons & Co., Limited

Aluminum for Casting

If you want the Best Aluminum Specify

“ASH’S”

If you have not already used Ash's 99 per cent Aluminum or Ash's Aluminum Alloy, send in a Mail Order now.

We have many unsolicited testimonials from one end of Canada to the other.

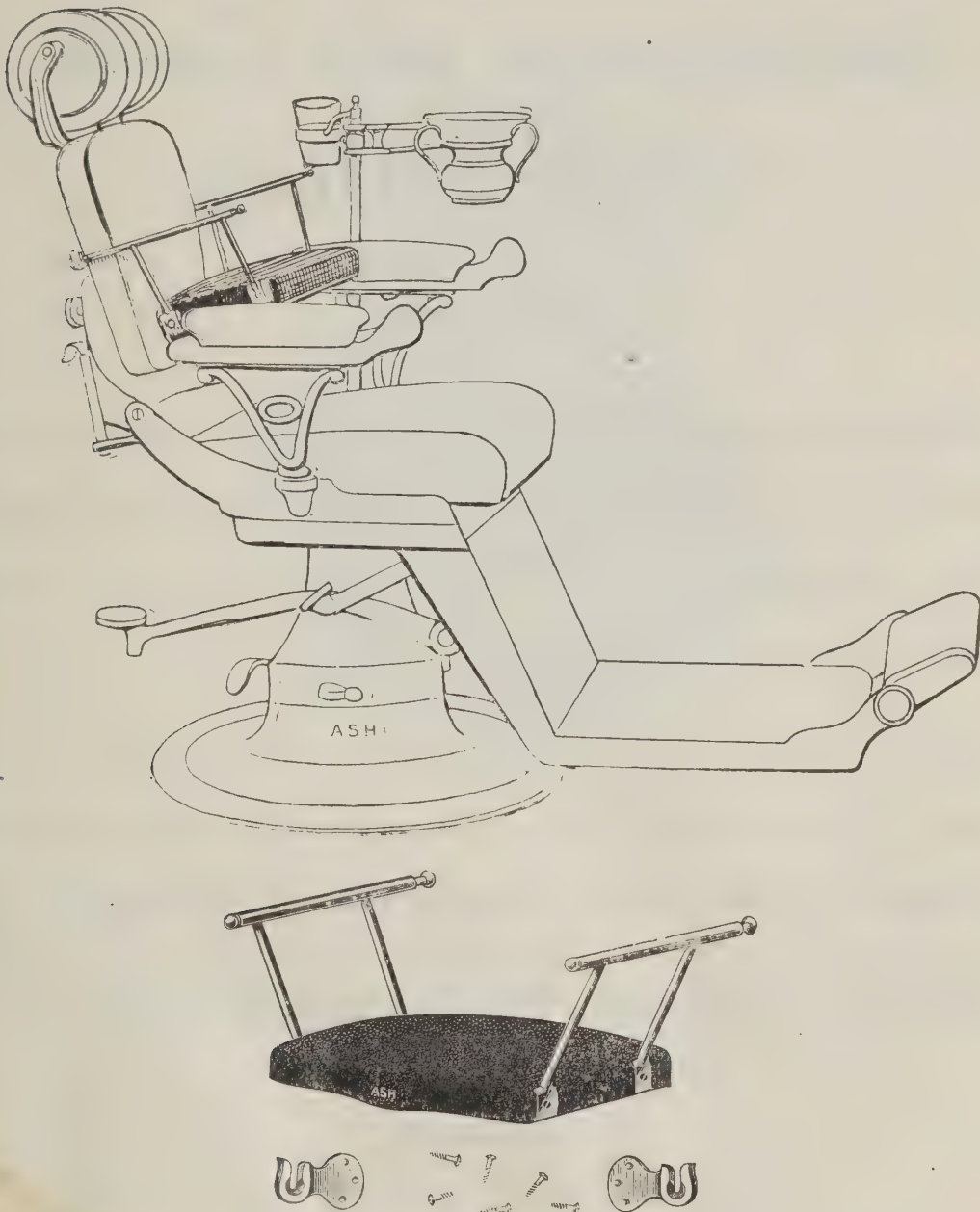
One of our customers writes:—"Send me 20 packets Ash's Aluminum Alloy for casting metal plates. **I find this good.**"

PRICES

Aluminum Ingots	per lb.	\$1.50
Aluminum Ingots	per half lb.	0.75
Aluminum Alloy	per pkg.	0.65

Claudius Ash, Sons & Co., Limited

Child's Seat For Dental Chairs



The Child's Seat is shown separately and attached to chair. It is quickly detached and will be found a boon to many offices.

Upholstered in Dark Green Leather, \$8.00

CLAUDIUS ASH, SONS & CO., Limited

Beutelrock and Gates' Glidden Drills

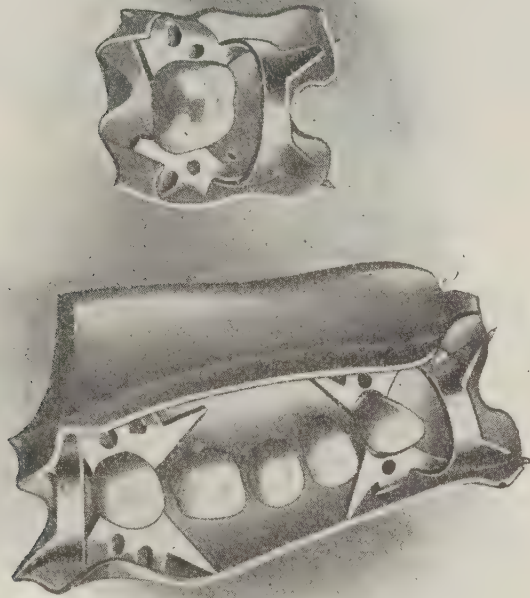
We desire to draw your attention to these articles as being those in which quality of material and manufacture count for so much. Many Beutelrock and Gates' Drills are so in name only and are not worth a place in your office.

We have always used the best material obtainable, and as the work to be accomplished with them is so delicate and important, we make them to the highest standard. The price is attractive also.

For either Hand Piece or Right Angle, \$3.00 per doz.

CLAUDIUS ASH, SONS & CO., LTD.

Rubber Dam Clamps



The above illustration shows how to effectively Dam one or more teeth with a minimum amount of rubber. You will apply rubber through this simple method to many operations that in the old way is almost prohibitive.

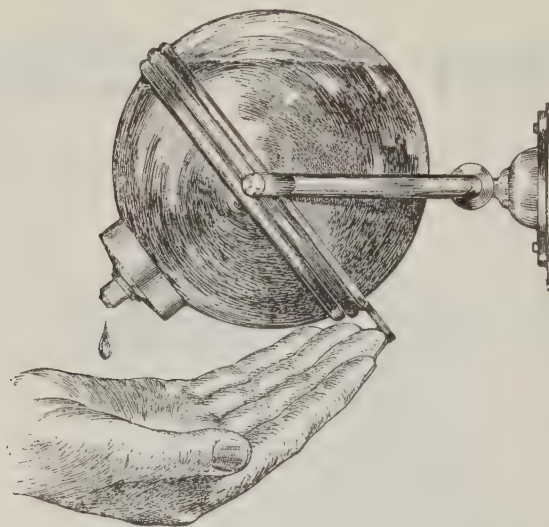
Made of the finest material in three sizes.

No. 24 for molars.

Nos. 1 and 2 for Bicuspids.

Price each, 65 cents. Per set of three, \$1.75.

CLAUDIUS ASH, SONS & CO. Limited,
11-13 Grenville St.,
TORONTO, CANADA.



THE ONLY ASEPTIC WAY OF USING SOAP

Is by means of the BEAU BRUMMEL LIQUID SOAP DISPENSER, the only mechanically-perfect, successful device which furnishes a measured quantity of absolutely uncontaminated soap from a practically air-tight dispenser, each time it is used.

Embellishes the washstands, eliminates soap waste and mussy soap dishes. Requires no care and attention.

As for the soap itself, we have perfected practically a neutral soap, which being prepared from pure vegetable oils, is the purest form of soap that can be had, free from acids, animal fats and tallow, and it is not only a better detergent and cleanser than cake soap, but is an emolient to the skin, refreshing, stimulating and invigorating.

The Beau Brummel Liquid Soap System is the only one whereby the Dentist can assure absolute asepsis in using soap, in his offices.

We have just put out a nice equipment in a hinged hard-wood box containing

Price

1 Soap Holder.....	}	\$6 00
$\frac{1}{2}$ gallon Perfumed Soap for.....		

CLAUDIUS ASH, SONS AND CO. LTD.
SOLE AGENTS FOR THE DENTAL TRADE

Reinforcing Casting Principle

It has been said that Progressive Dentistry demands a Method of perfect Root Adaptation



with some overlapping edge or band to protect the root, and that the process of making this band or overlap in the human mouth be such as to avoid undue uncleanness, impinging of parts, or pain.

HERE IT IS

AND MORE. Gold Mesh supplies a framework of soft, pliable mesh, to both sides of which wax is applied. This embedding of the mesh makes it possible and practicable to produce scientifically ANY ADAPTATION with overlapping margins or bands when desired.

To lift patterns from artificial teeth, root bases, etc.

To unite separate parts, as root-base pattern to facings and porcelain crowns.

To unite one or more dummy wax-mesh patterns for bridge work into continuous pattern, and by slightly warming to adjust for articulation upon models.

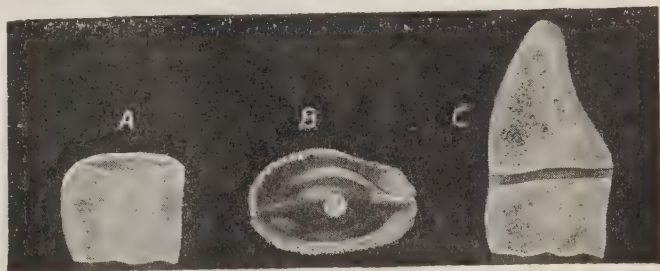
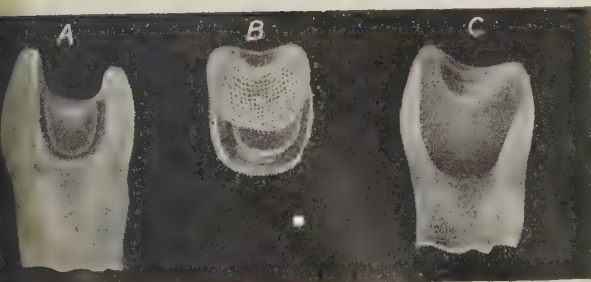
CONSIDER THE EFFECT UPON YOUR PRACTICE OF ACHIEVING BY A SIMPLE METHOD THESE GREAT RESULTS

MARGINS and bands definite.

ENMESHING OF THE MEMBER, uniting patterns.

SHRINKAGE and Warpage controlled.

HOLDING together in perfect union of two or more wax patterns as in bridge dummies.



This product has passed its tentative period. Such is our confidence in it that we offer to refund money, for unused portion returned, to anyone having ordered a \$5.00 piece.

Price, \$1.15 per sq. inch

Sample Size, \$1.15

Standard Size, \$5.75

Send for Descriptive Pamphlet, No. 4. Order direct or through your dealer

Tatham Gold Mesh Company

90 Griswold Street, Detroit, Mich, U.S.A.

SOLE AGENTS FOR CANADA:

Claudius Ash, Sons & Co., Limited, Toronto

BORITH

An excellent preparation to recommend your patients for cleansing Dentures. It is a thoroughly reliable preparation.

Price \$2.00 doz.

ZIMO

The best obtundent on the market for the painless extraction of teeth and minor surgery; Antiseptic and Germicidal. Can be used in all cases; safe and effectual. No bad after effects. Once used, always used. "ZIMO is a great practice builder," as everyone says who has used it. 4 oz. bottle, \$1.00; 6 bottles, \$5.00. Every bottle guaranteed. Try a bottle; if not all right send it back and get your money.

Manufactured and put up by
Dr. S. T. WHITNEY,

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General Agents:

CLAUDIUS ASH, SONS & CO., Limited

11-13 Grenville Street, Toronto, Ont.

SEND FOR A SAMPLE OF

Ash's Empire Cement

We have our new Cement product now ready for market. It is done up in a nice container and the quality is sure to please you. The price is right as you will see by the following figures.

1 Color Packet - \$1.00

4 " " - 2.50

We have a limited number of sample packets. Send us a request postal before the supply is exhausted.

Claudius Ash, Sons & Co., Limited

WHAT YOU HAVE SO OFTEN ASKED FOR

A Popular Temporary Stopping at
30 Cents a Box

It's a good guttapercha, scientifically prepared,
and it will please you as it has
satisfied many others

We Make a Quantity Rate of 6 Boxes
for \$1.50

SEND US AN ORDER NOW

ASH'S POPULAR STOPPING

Fellowship Alloy



The original Tested Alloy, and for the past 15 years the standard of the world

Great Edge Strength. No Contraction 120000 of an inch Expansion.

Learn to say Fellowship

SOLD BY

ALL DENTAL DEPOTS

MANUFACTURED BY

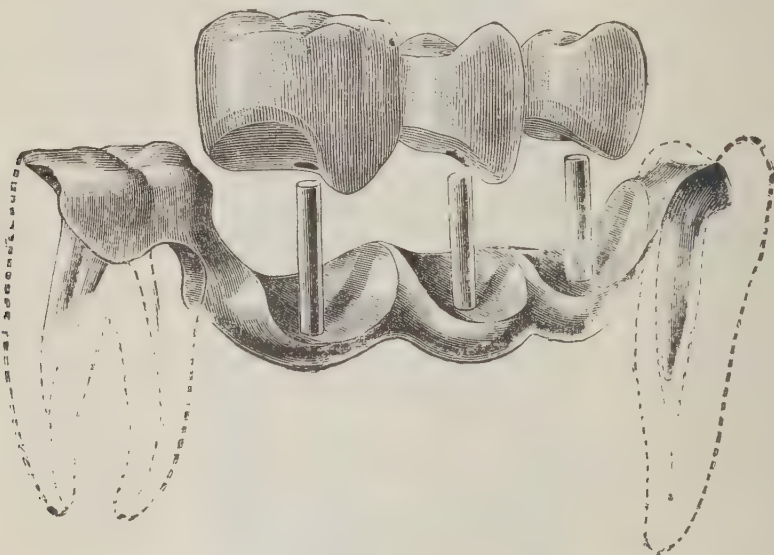
DENTAL PROTECTIVE SUPPLY CO.,

Chicago, Ill.

C. L. DALY

The leading Specialist in Dental Mechanics to the Profession.

A strong and simple tooth for Bridge Work (replaceable) is the Non Platinum Tube Tooth.



Case like the above can be made up either with Tube Teeth or Dowel Crowns \$3.00 per tooth, teeth extra.

Partial Price List for General Work.

Gold Crowns—Cen, Lat. Cus. and Bic.....	\$2.00
Molars.....	\$2.25 to \$2.50
Bridgework—Ant. Dummies...	\$2.00
Ant. Richmonds (when base is supplied by you).....	\$2.25
Bicuspid Dummies.....	\$2.50
Molar.....	\$3.00 to \$3.50
Facings charged extra at market price.	
Gold Inlays— (Send wax impression packed in tissue paper.)	
Casting only.....	\$0.75
Gold.....	\$.05 per gr..

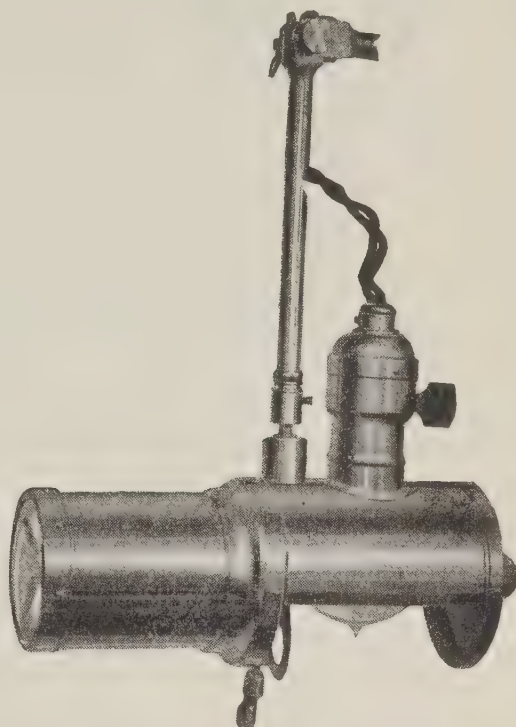
Rubber Dentures—	
Plate Work.....	\$2.50 to \$3.00
(Partials, \$2.00)	
Swaging metal plates (swag- ing only) Aluminium.....	\$3.00
“ Gold.....	\$3.50 to \$4.00
Casting metal plates (cast only).....	\$4.00
Finishing with vulcanite....	\$2.50
All teeth charged extra at market price.	
Send impressions (unpoured) plaster preferred, for all classes of work including metal work.	

SEND A TRIAL ORDER. SATISFACTION GUARANTEED.

When you write, give full particulars of case and when wanted.
You will not be disappointed.

CHARLES L. DALY
11 GRENVILLE STREET, TORONTO.

If an Intense White Light is desired Order the Lewis Illum- inator with the Mazda Lamp



Patent May 4th, 1904
Dec. 20th 1910

The "Mazda" is the first small Tungsten perfected. It produces a very white light of 40 candle power, at a consumption of only 25 Watts. Fits the Lewis Illuminator same as the "Femco" commonly supplied, but adds \$1.90 to the price, making it \$17.40. The lamp alone is \$2.50. **For 110 volt current only at present.**

The Bracket is always \$4.65 Extra.

BUFFALO DENTAL MANUFACTURING CO.

BUFFALO, N.Y., U.S.A.

“A Rift in the Clouds!”

exclaimed one of the most prominent
prosthetic authorities, when he saw the

JUSTI TRUE TO NATURE TEETH

The great problem of prosthetic dentistry has been the proper articulation of artificial dentures, particularly the bicuspid and molars.

The “True to Nature Bicuspid and Molars” have solved the problem, as the interlocking of the uppers and lowers is perfect, each tooth fitting in its respective place, while the large occlusal surfaces insure proper mastication.

These teeth are constructed in such a way that, when the jaw assumes the lateral position, there will be contact from the central back to the molars on one side and bicuspid and molars on the other, or vice versa; during the incising motion of the jaw, each tooth slides down the occlusal plane to its respective position.

Owing to the characteristic form of these teeth, time can be saved in mounting them.

Most of our large variety of front molds can be used with the “True to Nature Bicuspid and Molars;” this, together with the unsurpassed Justi Porcelain and Shades, gives the Dental profession a line of artificial teeth which is close to perfection.

These Bicuspid and Molars can be furnished in platinum pin or diatoric teeth.

Call for **“Justi’s True to Nature Teeth.”**

H. D. JUSTI & SON

Philadelphia, Pa.

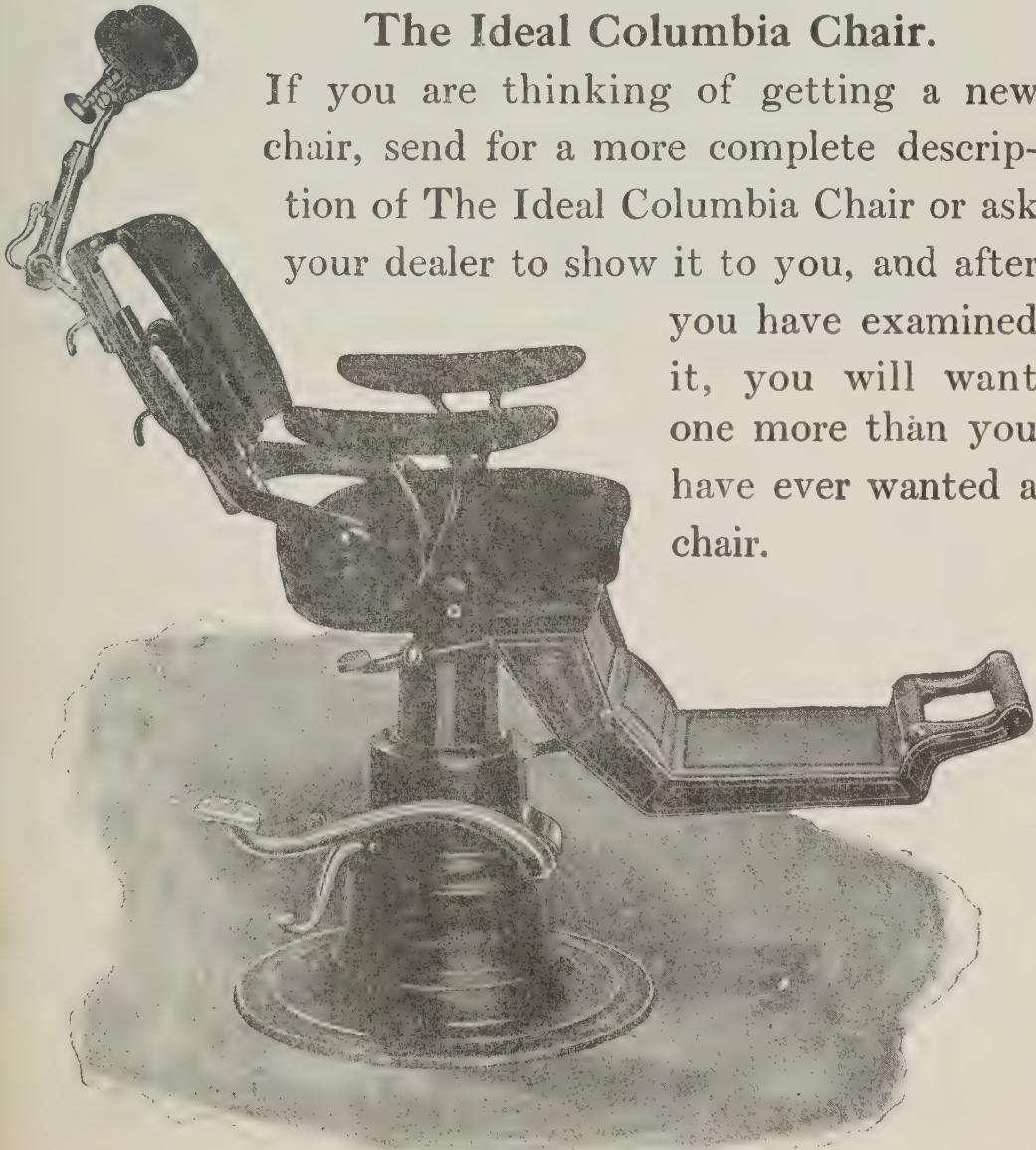
Chicago, Ill.

The Ideal Columbia Chair

is the only type of Columbia Chair now made, as we have discontinued making *all* former models and combined the best features of our previous styles, with additional improvements, in this—

The Ideal Columbia Chair.

If you are thinking of getting a new chair, send for a more complete description of The Ideal Columbia Chair or ask your dealer to show it to you, and after you have examined it, you will want one more than you have ever wanted a chair.



IN STANDARD FINISH, \$230.00.

THE RITTER DENTAL MFG. CO., Rochester, N. Y.

T. N. CLARK, 167 KING ST. WEST, TORONTO,
WHOLESALE DISTRIBUTER.

GOLD SOLDERS

**ASK THE DENTIST OR
MECHANIC
WHO IS USING OUR
SOLDERS**

THE BEST AND CLEANEST
FLOWING TO BE HAD
PRICES RIGHT
SPECIAL QUANTITY RATES

No. 22 Solder	No. 16 Solder
No. 20 Solder	No. 14 Solder
No. 18 Solder	Coin Solder
Silver Solder	

All to be had also in wire form.

INLAY GOLD

24 Kt. in 2 Dwt. Buttons
24 Kt. with 5% Platinum

FILLING GOLD

Foil No. 4, 5, 6, 30 and 60
Cylinders No. 1-4, 1-2, 5-8, 3-4,
1, 1 1-2 and Ass't
in 1-32, 1-16, 1-10 and 1-8 Vials

Special rates in oz. lots

GOLD PLATE

24 Kt.
22 Kt. Soft, Medium or Hard
20 Kt. Plate or Wire
18 Kt. Plate or Wire

CLASP PLATE OR WIRE

22 Kt. Special for Backing
18 Kt. Special for Backing

COIN GOLD PLATE

22 Kt. Shells or Disks

PLATINUM

Foil, Extra Soft, 1-1000, 1-2000
Wire, 3% to 30% Iridium

SCRAPS AND FILINGS

**BOUGHT FOR
CASH OR IN EXCHANGE**

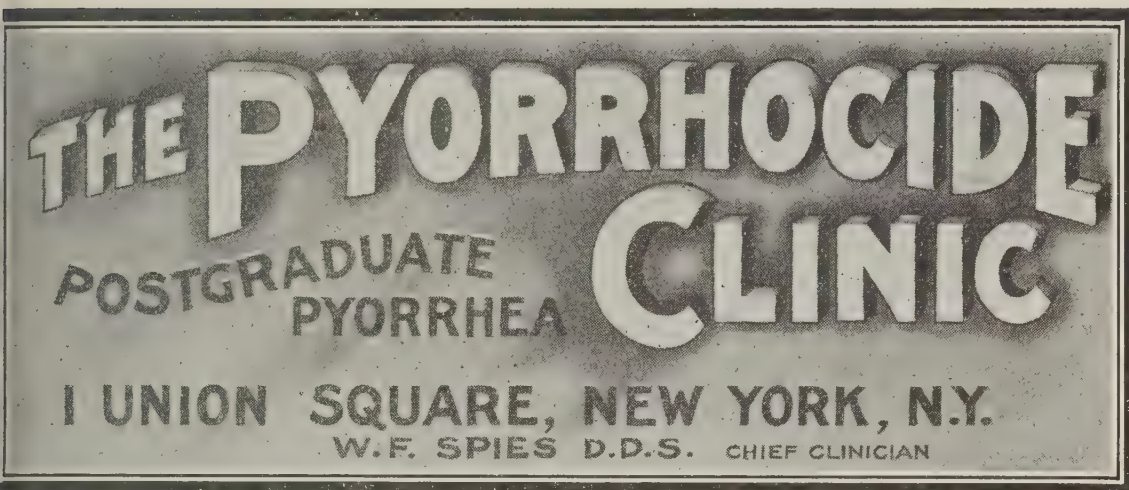
Sweeps Refined

JULIUS ADERER

MANUFACTURER

101 WEST 42nd STREET - - NEW YORK

Branches: Brooklyn, N.Y.; Seattle, Wash.



YOU CAN PRODUCE EXCELLENT RESULTS IN THE TREATMENT OF PYORRHOEA if you go about it properly. Your patients will appreciate the results you effect.

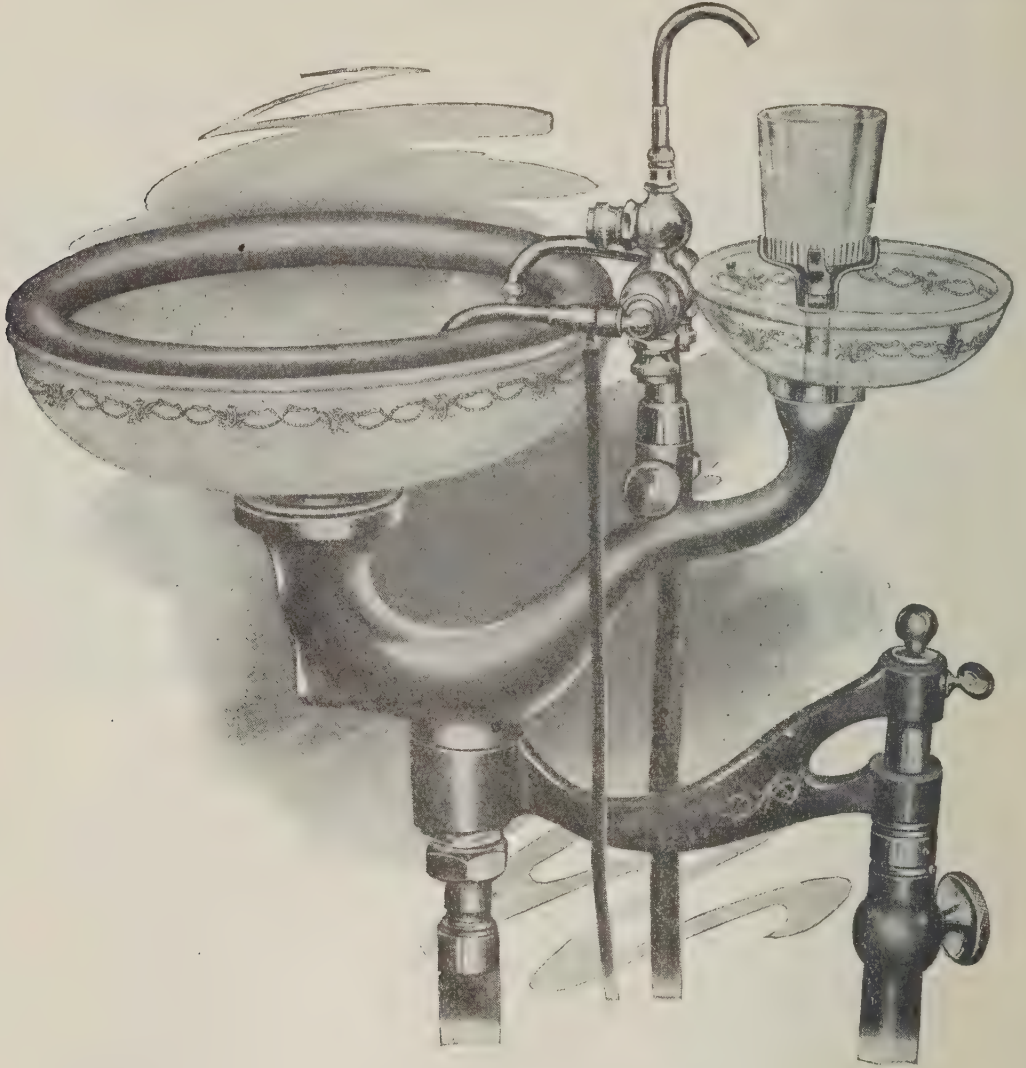
Our latest book on "Pyorrhea, its Causes, Effects, Treatment and Prevention," is the most complete work on the subject ever published; is extensively illustrated and will be mailed to Dentists **FREE ON REQUEST**.

The Clinic is conducted for **your benefit without cost to you**, and will aid you in every way possible in getting the best results in the treatment of Pyorrhea and in maintaining mouth health.

Address:—

THE PYORRHOCIDE CLINIC

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WE MAKE:—

**FOUNTAIN SPITTOONS
RESERVOIR SPITTOONS
GAS APPARATUS**

Better than the other fellows and, consequently, sell more than **all** the other fellows.

The secret is:—Keep on making them better and the business comes.
Same in your business.
Want a catalogue?

**A. C. CLARK & CO.
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LONDON W., ENGLAND.**

BEWARE

Dentists complain to us that they do not receive Davis Crowns when they order them.

The Cause and the Remedy

When "Davis" Crowns are ordered, many dentists receive the "Davis" Pin with some substitute porcelain. This substitution is made for reasons in which financial conditions and profit predominate. It is, therefore, common practice to send you some other Crown with a "Davis" Pin, when you ask for a Davis."

When personal financial reasons, instead of customer's accommodation, dictate a business policy, it is time for the customer to look out for himself.

How to recognise the "Davis" Crown at a glance, and thus disarm the substitutors

If you can read the number with the biting edge up—like this



You have a
"Davis"

If you read the number with the biting edge down—like this



You have an imitation
or a substitute

CONSOLIDATED



DENTAL MFG. CO.

The J. M. NEY COMPANY, makers of NEY'S DENTAL GOLDS,
are now issuing, FREE, a veritable

BUDGET OF GOLD KNACKS FOR THE GOLD WORKER

—a very comprehensive, useful little book of things that you once learned and have forgotten; the little knacks taught only by experience and never included in a text-book; an indexed reminder of “just how you did it before;” **not** a treatise on the easy, obvious things in gold manipulation, but an orderly reminder of the way through the mean little jobs that you run up against.

Here is a word (verbatim) to show that the little book is appreciated.

J. M. NEY CO.,
Hartford, Conn.

Dear Sirs;—

I received your booklet “Ney's Golds” and I want to tell you that it is an elegant advertisement. I learned from it some points about soldering that I ought to have known; and something about annealing both plate and filling gold.

I had a central porcelain facing to tip yesterday and I tried your “Safe Method” and I find that it is an improvement on the method I was using.

So, I was so pleased with the information you so kindly sent me, that I immediately sent in an order for an ounce of solder to Kansas City.

Yours truly,

W. H. Conner.

Send for “Ney's Gold Book.”

THE J. M. NEY COMPANY

HARTFORD, CONN., U. S. A.

ASH'S Canadian Monthly Circular

Issued from Toronto on the First of each Month

VOL. II

APRIL, 1912

No. 7

CONTENTS

The Ideal Method of Constructing Cast Root Copings.
Second Hand Goods.
Advertising Section.
New Goods and Novelties.

CLAUDIUS ASH, SONS & CO., Limited

5-12 Broad Street, Golden Square

London W., England

Canadian Branch: 11-13 Grenville Street, TORONTO, Ont.

Phones North 4800-4801 After Hours C. 2631

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Breslau, Gartenstrasse, 22.	

We have just received a complete stock of Goslee Interchangeable teeth. Molars and
Bicuspid only.
SEND YOUR MAIL ORDER NOW.

Let us send you a nice Case
of two hundred Dowel Crowns

TWENTY DOLLARS

You cannot get one hundred of
any other reputable Crown for
less than

NINETEEN DOLLARS.

Added to this, Ash's Mineral Body
of which all our teeth and crowns
are made, is the only body that can
be successfully polished after grind-
ing.

Our Moulds are the most natural, and the
grinding surfaces are better than on any
other make of Crowns.

Claudius Ash, Sons & Co., Limited

Ash's Canadian Monthly Circular

VOL. II

TORONTO, APRIL 1, 1912

No. 7

THE IDEAL METHOD OF CONSTRUCTING CAST ROOT COPINGS.

Detailed description of any particular form of crown is properly preceded by a few general considerations relative to this subject, so rapidly gaining in the attention of our profession generally.

The principle of reinforcing wax patterns for castings is applied most practically to root bases for any form of crown, whether it be anterior all-porcelain with inlay setting, or a posterior bicuspid or molar used either as a single restoration or abutment for bridge.

Some forms of crowns lend themselves more easily than others to this method. Let us consider first the anterior inlay setting.

A perfectly non-impinging coping, is, beyond all dispute, the thing to be attained, and may be, by the following steps:

Prepare the root end, making a well defined bevel, and upon the root place a small strip of mesh—push pin through, and trim to approximately the proper size of mesh to be used.

Now remove and run some hot wax upon the upper side of mesh—replace upon the root, and with a piece of soft red rubber such as is used for pencil eraser, force mesh and wax down upon the root. Special emphasis is laid here upon the use of the rubber, because nothing else will so easily and surely enable you to force the waxed mesh well home and slightly over the edges.

Take this pattern off, turning the inside upward and you may find that a little more wax is required. If so, run in just a surface, or, with a hot round burnisher remelt the whole inside. While this is warm, re-adapt thoroughly to the root using rubber again.

The slight margins may now be very easily and accurately brought to place by the use of a slightly warm flat burnisher. Trim this pattern as you would a band, to suit the case in hand. Toward the labial side nearly all of the coping may be trimmed off for esthetic reasons.

Replace the pattern as many times as is necessary and bring margins to place. To warm the pattern for these re-adaptations, drop it into warm water, or, move it to and fro over a flame until uniformly warmed through.

The next step is to place the crown upon the top of the root base pattern and this is easily accomplished by warming the upper portion of the pattern while it is on the root, with a hot air chip blower. If wax is insufficient, run a little more over the surface. The tooth should be slightly warmed to prevent too sudden chilling of the wax.

Thus it is readily seen a very thin wax impression with a slightly turn over edge for coping may be manipulated with surprising ease and accuracy. This coping will fit when cast and give uniform results.

Familiarity with the reinforcing principle in anterior inlay setting, always convinces the operator that a crown should not be placed upon a root without an inlay setting.

CROWN BRIDGE ABUTMENT.

Let us consider a type of crown for Crown-Bridge Abutment.

The waxed mesh base is practically the same as for the base described above, except that the pin is bent over at a right angle—also that some roots require a definite band. Make this band by extending the waxed mesh, and trim as you would in forming a metal band. Note at this point a most important feature of Gold Mesh, i.e., it does not buckle; it is woven, therefore pliable, giving in all directions, and may be placed upon the root and extended some distance as a band without the annoyances encountered in continuous metal.

Select a tooth of the Goslee type, or, Steel's Facing—since these give the V shaped slant or space necessary for adjustment, and surface for soldering the dummy teeth in for bridge work.

Here you have a means for adjusting the tooth directly in the mouth in most cases without casting the root base separately—eliminating running of models, etc. The mesh is placed upon the tooth, hot wax run upon the mesh; pressed to place quickly; taken off the tooth; re-trimmed and re-adapted in the same manner as a root base impression. These two patterns are now ready to be attached. The point is that the mesh upon the tooth, the tip end for attaching, may be heated and attached at any angle or removed as often as is necessary, and when finally articulated, the porcelain tooth, by reason of the mesh reinforcing pattern, may be easily taken from the pattern without distortion.

Furthermore, the mesh-wax patterns are unlike those with a continuous metal backing because they can be re-shaped or changed readily. The enmeshing qualities, ever present in adjustment, render it possible to achieve through casting, truly splendid results. Only men who will not see or who prefer the old way just because it is old, fail to see in this progressive method that which gives to casting its most desirable feature.

The molar crown can be just as easily manipulated as a bicuspid.

In the process of adjustment, it may become necessary in articulating a bicuspid, to place a warm little ball of beeswax for a cushion while obtaining adjustment. This ball need not be taken out, but finished right over with the inlay wax. The beeswax cushion, remaining soft a long time, facilitates articulation, which otherwise would be difficult of accomplishment.

Should it become necessary to cast the base separately and then take an impression and run models, an accurate pattern for base and crown can be easily formed in a short time, and the two patterns can be cast in the same mold. The two castings may then be waxed in place upon the articulation and soldered together. Care must be taken to make the root base pattern very thin. There is to be noted here a very important point in favor of the mesh. A hot spatula may be run over taking off the wax or shaping right down to the mesh itself, and the impression on the under side will remain unharmed. This pattern is left very thin so that there will be room for adjusting the tooth coping to the root base coping when they are set upon the articulator for articulation. It is assumed that a tooth will be selected and approximately fitted before attempting to form any pattern.

Much might be said concerning the modifications of these two types, but believe that the anterior all porcelain type for anterior, and the saddle shape all porcelain type for bridge abutments, are the most generally used, being esthetic and economical.

It will be readily seen that the reinforcing principle may be applied to any form of root of any size, in any position, anterior or posterior—without having always to change one's technique or to encounter other difficulties.

Finally—a word must be added concerning two points,—alloyed edges, and the control of shrinkage and warpage.

ALLOYED EDGES.

It is quite well established that pure gold properly treated casts best. For a thin margin or band, the one objection to pure gold is that, being soft, it lacks the proper tenacity for polishing

and burnishing to advantage. The mesh is 22-k, and when the pure gold is cast into it, the edges or margins become an alloy, giving the pure gold just the required quality for this part of the casting. Thus, one may cast with pure gold and while in the mold, form an alloy where it is most needed.

CONTROL OF SHRINKAGE AND WARPAGE.

How, it is then asked, may the mesh exert any restraining power over the cooling metal? Let the most conservative but impartial operator make a reasonable number of tests, casting both with and without the mesh, taking the same care that he does in his ordinary practice in casting, and he will find results more uniform with mesh than without.

Without mesh, under ideal conditions, with a perfect technique, and the expenditure of much time, observing carefully all the details of casting, one can obtain good results. Now the majority of busy practitioners who are doing casting, appreciate some of the difficulties, especially in root base work, when they get down to every day practice, and have an open mind and a welcome for a simple and scientific principle that lightens, expedites, and assures good results.

Here are the results of some tests made:

A wax pattern with several thicknesses of mesh, also one without mesh, were cast at the same time, under the same and very favorable conditions, and submitted for analysis to an expert. It was found that the specific gravity of the casting containing the mesh was considerably less than that without mesh, indicating that the interstices contained air, and which would have a tendency to throw the contraction from the surface which the mesh immediately underlies. Another theory is that the casting cools quickest around the mesh inasmuch as tests have proven that the mesh does not melt upon being surrounded by the molten gold, and which would have a tendency to minimize the contraction in the surface which the mesh immediately underlies—the adaptation surface.

—A. W. TATHAM, D.D.S.

Second-Hand Goods

1 Harvard Mechanical Chair, good condition.....	\$70 00
1 Columbia Chair, Maroon Plush, in excellent working order. This Chair is in Maritime Provinces.....	70 00
1 Davis Gasometer, less Face Piece and Tubing, Excellent Condition...	18 00
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This compound is the most reliable on the market, and has stood the test of time. If you have not used it, send us a request postal for a sample.

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Ash's New Empire Chair

The following illustrations of our New and Improved Chair will give the intending purchaser a very complete idea of its appearance and general features. Many of the chief improvements and modern up to date details need to be actually seen to be appreciated. The price of this chair is much lower than any other good chair ever sold in Canada. We are able to make this price because of our many years of experience at chair making; our complete factory at Walton-on-Thames, and finally by the help of the British preferential tariff. These chairs are guaranteed absolutely, and we can assure you that their value has never been equalled.

CLAUDIUS ASH, SONS & CO., Limited,
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CANADA

Ash's New Empire Chair with Roll Head Rest



Highest
position
of seat 31
inches.

Lowest
position
of seat 16
inches.

This chair
is equipped
with Collap-
sible Arms,
Clutch - Tilt,
and Back.

This illustration shows the front of the chair with the most ideal of Head Rests in position. One of our customers who has had plenty of experience with other chairs, writes as follows:—

"I was a little afraid of the Roll Head Rest, but wouldn't have anything else on a bet. It's the best chair I ever saw for the money, or for \$75.00 more."

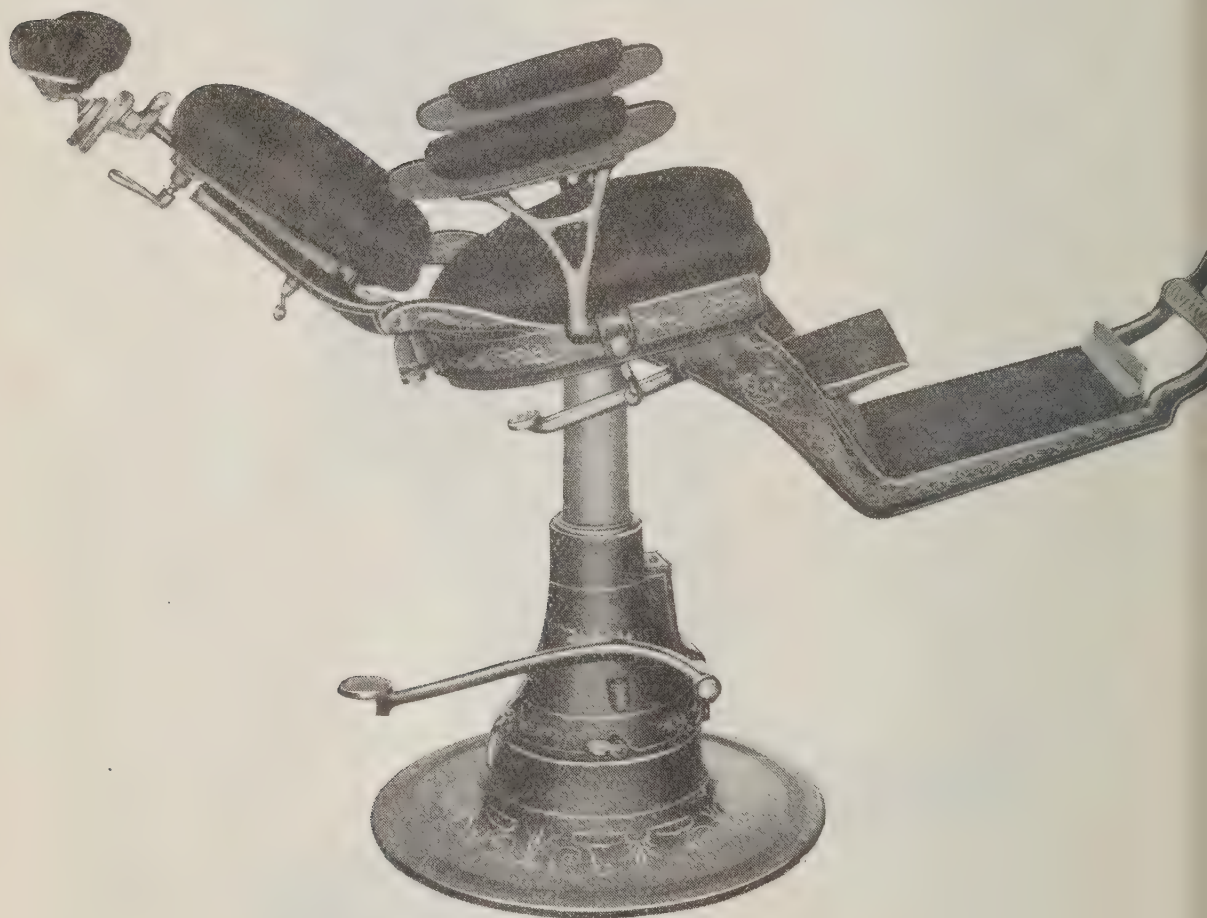
In finest Morocco Leather with Linoleum Foot Board. \$170.00
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White Enamel adds \$12.00 to above prices.

10% Discount allowed for prompt cash.

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Highest position of seat 31 inches. Lowest position of seat 16 inches.



In finest Morocco Leather, Linoleum Foot Board \$175.00

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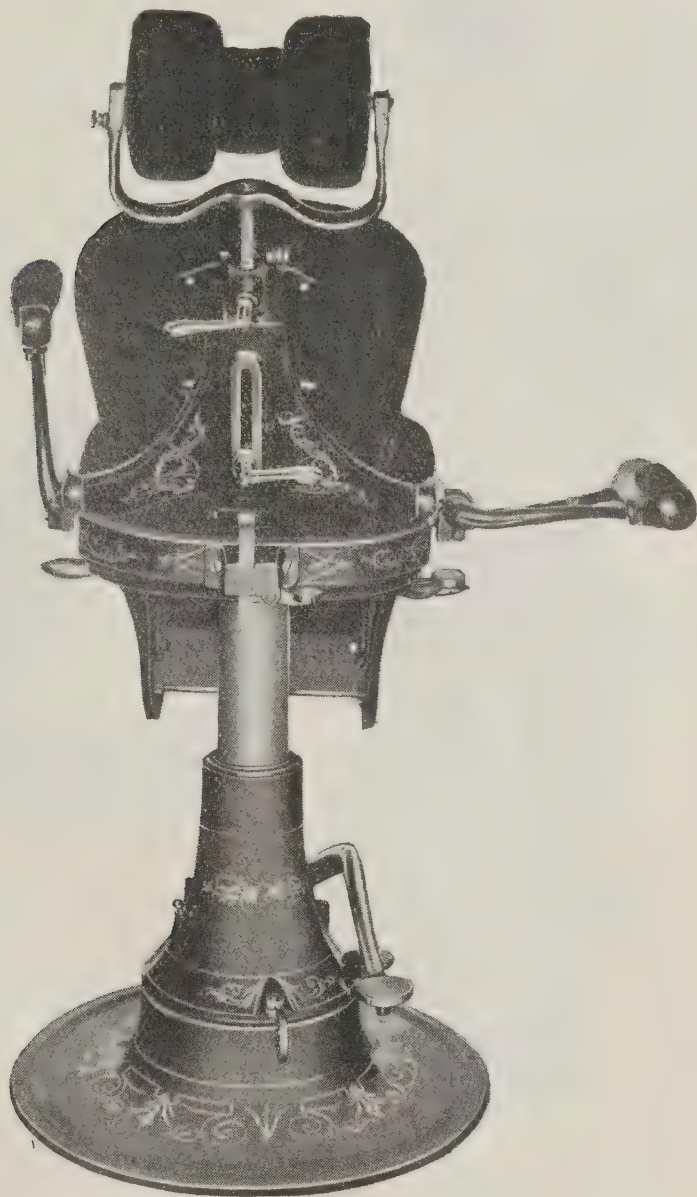
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This chair is equipped with Collapsible Arms, Clutch-Tilt and Clutch Back.

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Highest position of seat 31 inches. Lowest position of seat 16 inches.



This illustration shows the operation of the adjustable arms. The chair is also equipped with the Clutch-Back and Tilt. The famous Roll Head Rest shown, never works loose or gets out of order. It is most easily adjusted and its crowning victory over all other head Rests is that it supports the patient at the base of the skull, and not at two small spots, as in the case of all Sectional Head Rests.

Ash's New Empire Chair with Roll Head Rest

Highest position of seat 31 inches.

Lowest position of seat 16 inches.



This illustration shows how the dropping of the Arm makes a convenient seat for the operator. This Arm Seat will take with safety a 225 pound man. Another of our satisfied customers writes us as follows:—

"I wouldn't trade my chair for half-a-dozen of any other kind—it's sure the chair."

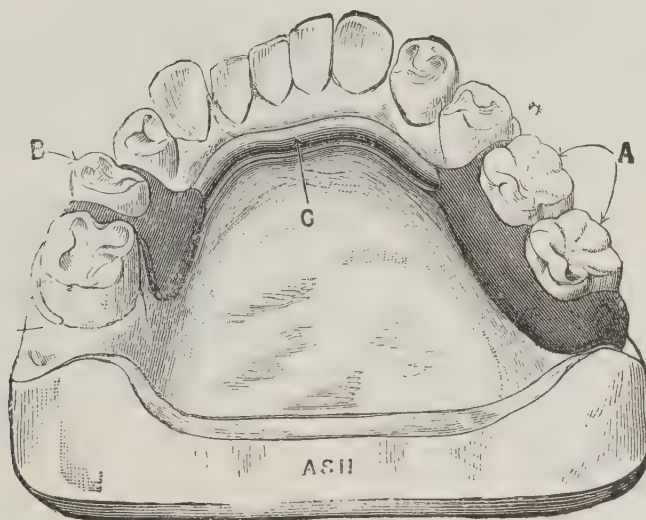
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No tendency to push teeth outwards.

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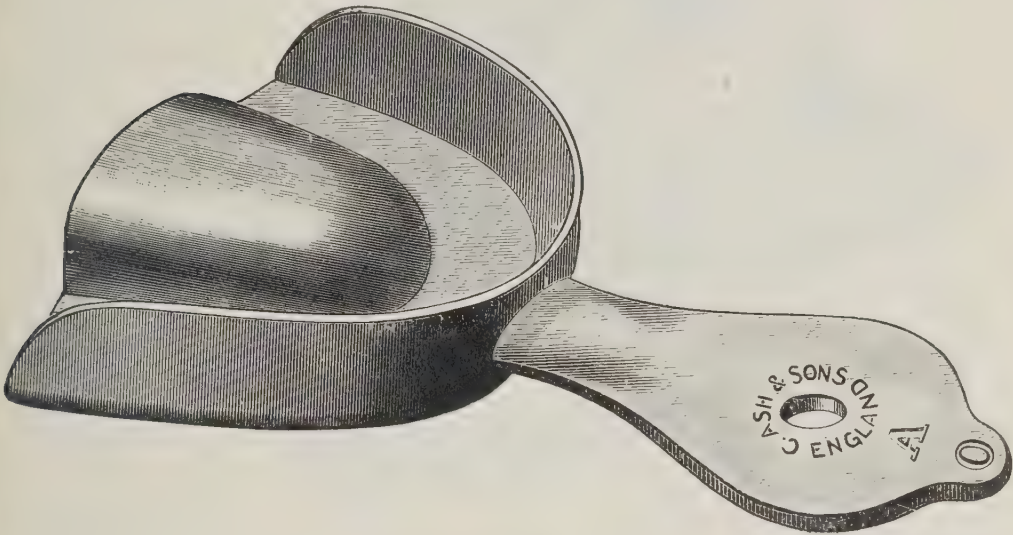
Greater rigidity.

Per dwt. \$.40

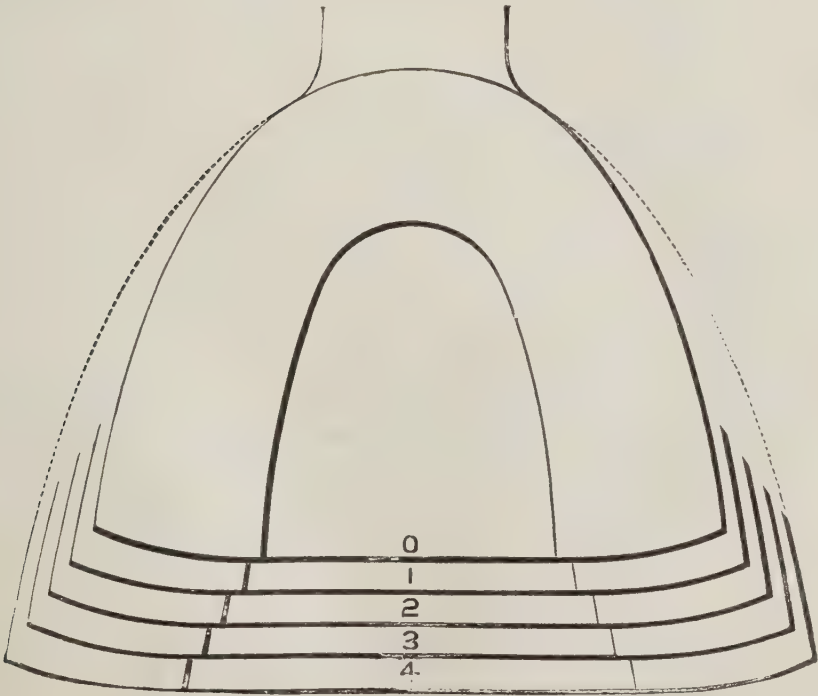
Claudius Ash, Sons & Co., Limited

UPPER IMPRESSION STYLE "A"

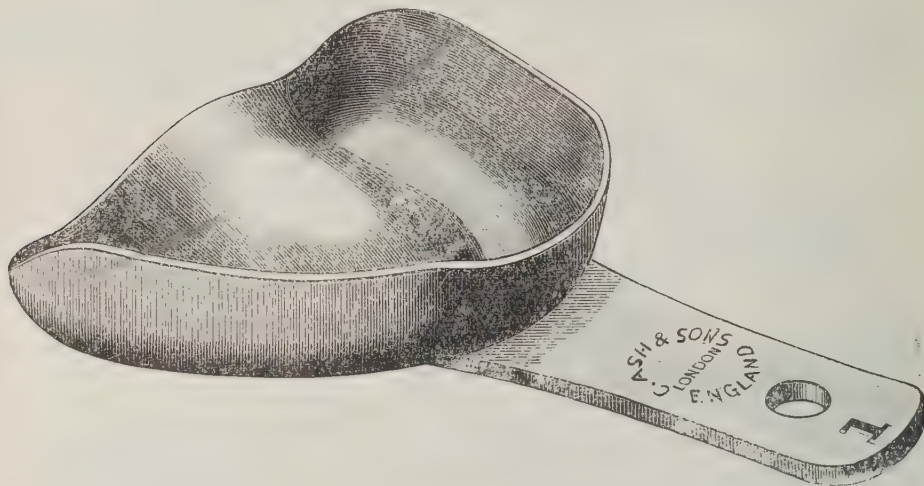
Depth of Tray, 5-8 in. Height of Palate, $\frac{1}{2}$ in.



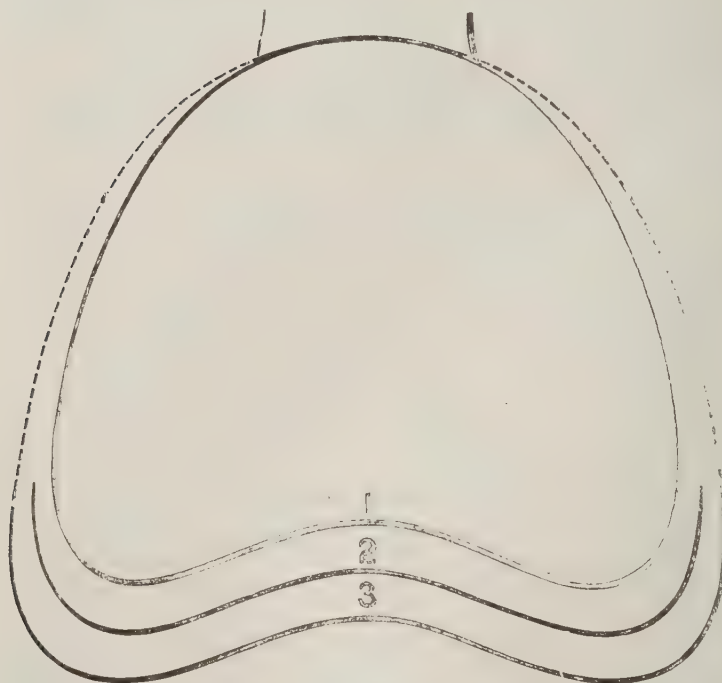
Sizes 1 and 3 in Set B.



UPPER IMPRESSION TRAY "ANATOMICAL."

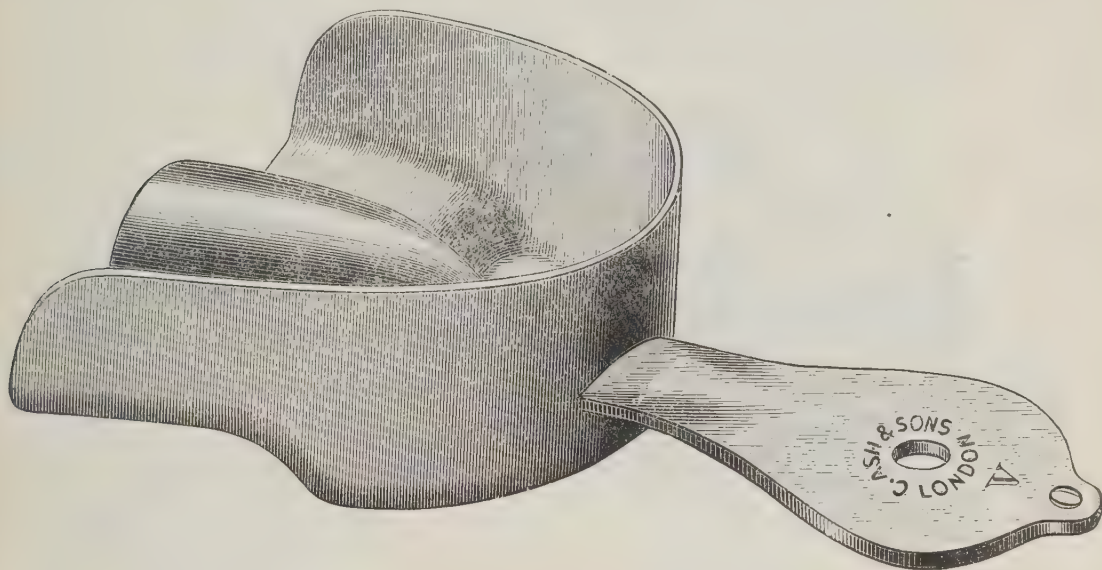


Sizes 2 and 3 in Set B.

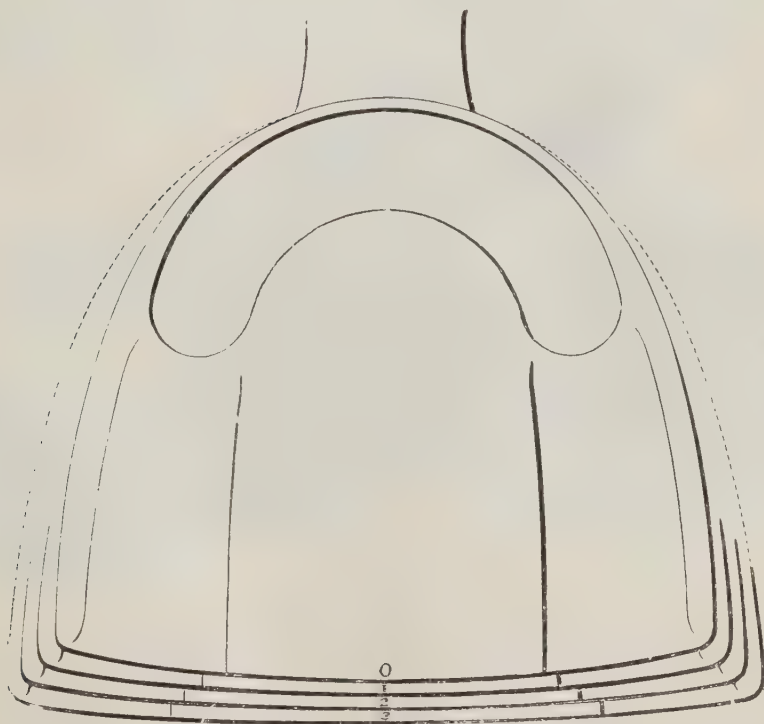


UPPER IMPRESSION TRAY—STYLE “V” WITH
WELL IN FRONT.

Depth of Tray, 5-8 in. Depth of Well, 7-8 in. Height of Palate, $\frac{1}{2}$ in.



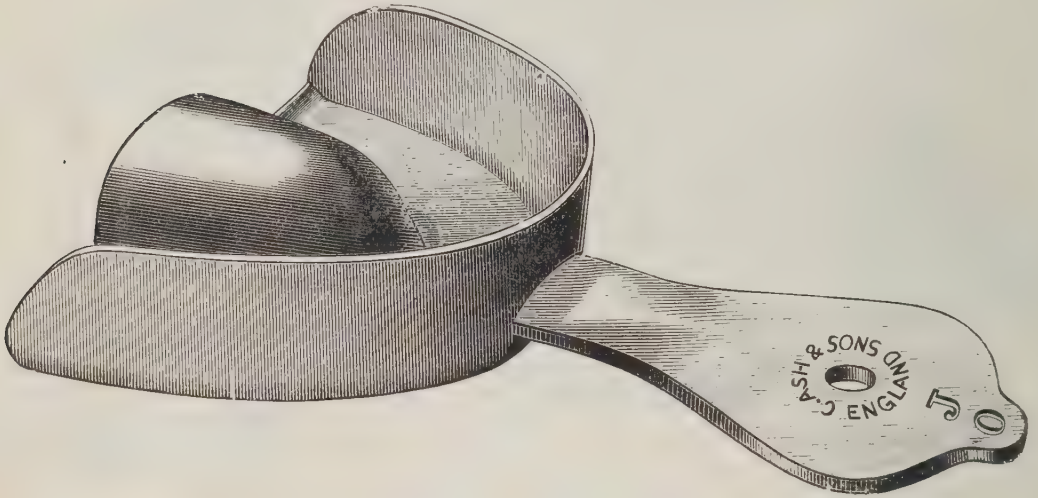
Sizes 1 and 2 in Set B.



UPPER IMPRESSION TRAY—STYLE “J”

with narrow Palate, and slightly turned up ends.

Depth of Tray, 5-8in. Height of Palate, 9-16in.

**LOWER IMPRESSION TRAY “ANATOMICAL”**

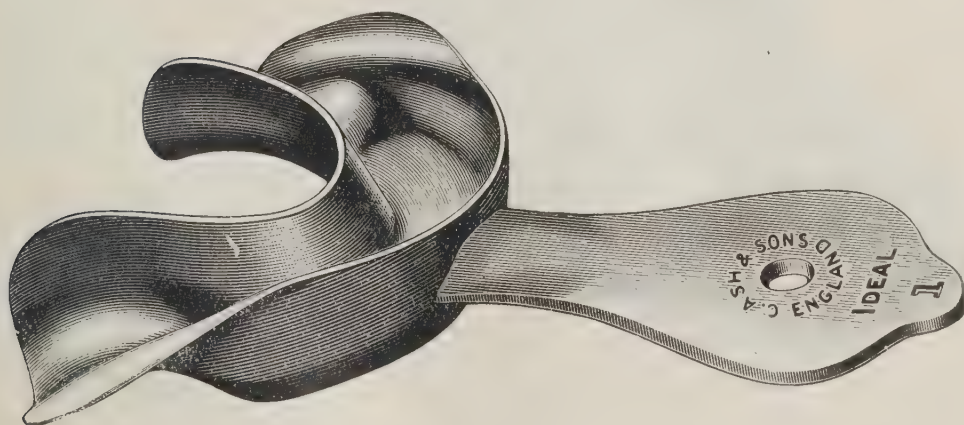
LOWER IMPRESSION TRAY STYLE "EVS."

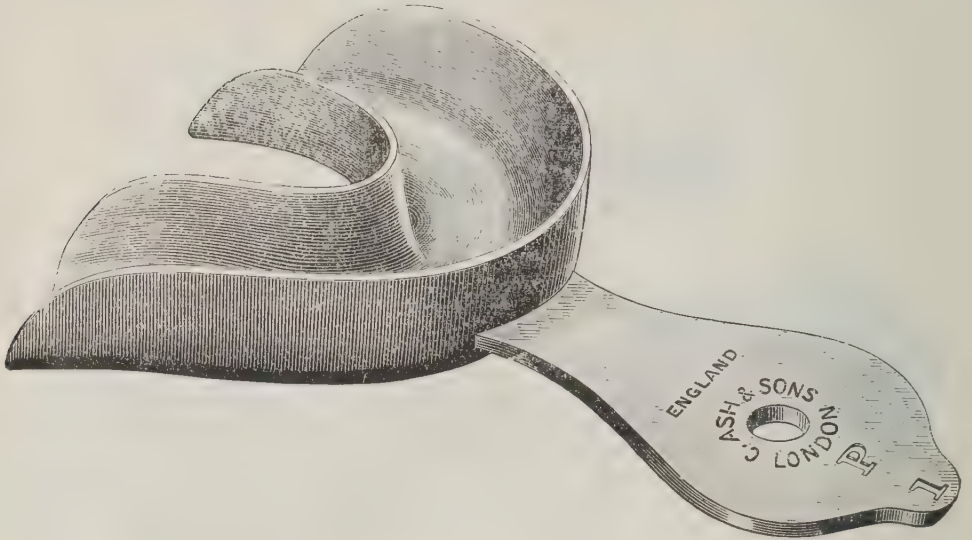
Very shallow for edentulous cases.



LOWER IMPRESSION TRAY—STYLE "IDEAL."

With Well in front, deep inner Wall, and with
outer wall flattened on each side
at the back.



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Depth of ends, 7-16 in.

Depth of Well, 11-16 in.



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Are the best in the world and are the standard by which all others are judged.

NOTE.—Our Rubbers weigh 16 ozs. to the pound, exclusive of linen backing and box.

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	Per lb.	5-lb. lots	10-lb. lots	20-lb. lots
New Pink, Medium.....				
No. 1X Pink, Medium.....				
No. 1 Pink, Light.....	\$6.00	\$5.40	\$5.00	\$4.75
Gum Pink, Medium.....				
Gum Pink, Light.....				
No. 2 X Pink, Medium.....				
English Pink, Medium.....	5.00	4.50	4.25	4.00
English Pink, Light.....				

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Improved Black.....		
Combination.....		
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A. E. Elastic, Dark Brown.....		
W. Elastic, Dark Brown.....		
Whalebone No. 1, Dark Brown.....		
Whalebone No. 2, Light Brown.....	3.75	3.35
Solid Base.....		
Dark Red.....		
Flexible Base.....	3.30	2.97
Dark Elastic.....		
Maroon.....		
Red.....		
Orange.....		
Dark Brown.....	2.75	2.45
Brown.....		
English Base.....		

SPECIAL—FOR TENDER GUMS, ETC.

	Degree Fahrenheit	Time H	M	lb.
Soft Pink, for lining Palates.....	310	1	15	\$6.00
Soft Dark Red.....	310	1	15	4.25
Vela for Artificial Palates.....	270	6	0	6.00
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Pink Weighted				6.00
Brown Repairing				4.75
Pink Repairing				6.00

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FOR LOWER DENTURES ONLY

Patented in United Kingdom and U.S.

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This Rubber Strip is held in position in the denture by the suction which is produced by the small holes on the curved surface and to the gum by the suction through the larger holes on the flat surface. The Strip can be removed and cleansed, and replaced in half a minute.

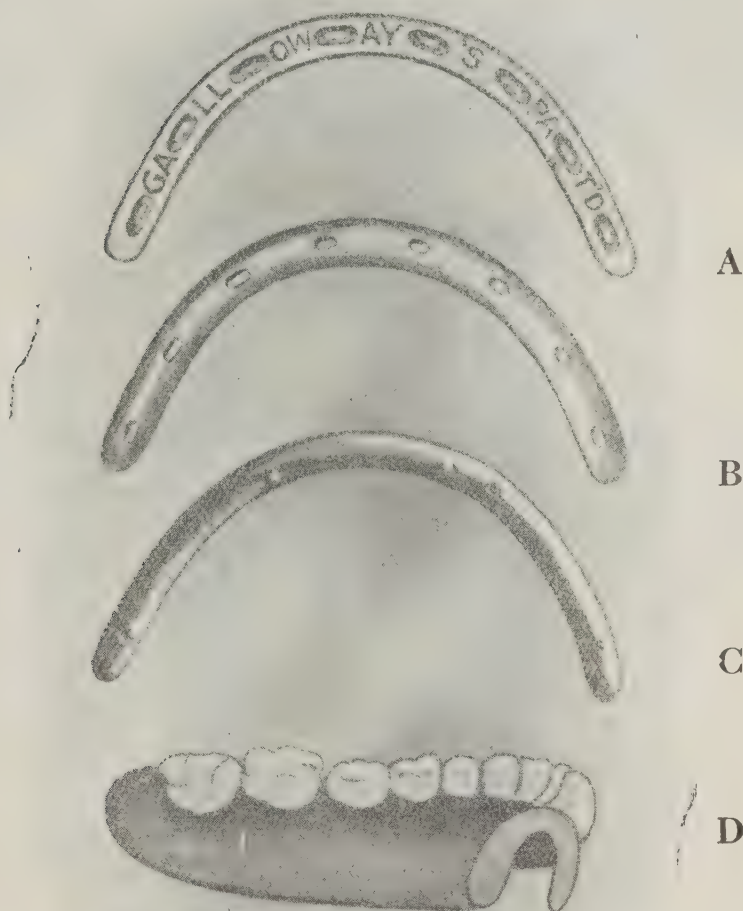
The device is cleanly and secures the denture properly without any discomfort to the patient.

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GALLOWAY'S SUCTION DEVICE FOR LOWER DENTURES ONLY—continued.



Natural size.

A and **B** show the flat and rounded surfaces of the rubber strip and the holes which serve to retain the denture in position in the mouth.

C—Metal bar with countersunk holes into which the heads of the pins should be firmly pressed.

D—Vulcanite blank which shows the rubber strip in position.

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These two patterns are en-meshed directly in the mouth, readjusted as many times as desired and removed from the root without distortion.

FEATURES.

Correct Root Base—Coping with or without Band—Pure Gold Casting with Alloyed Edge—Uniform Results.

Instructive literature for many other uses upon request.

Price, \$1.15 sq. in., Canada.

Sizes, 5 sq. in., 2½ sq. in.

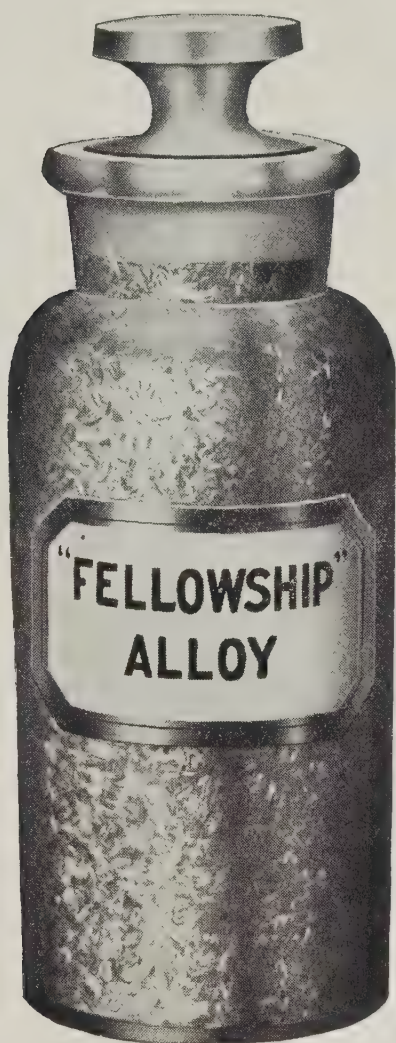
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Great Edge Strength. No Contraction 120000 of an inch Expansion.

Learn to say Fellowship

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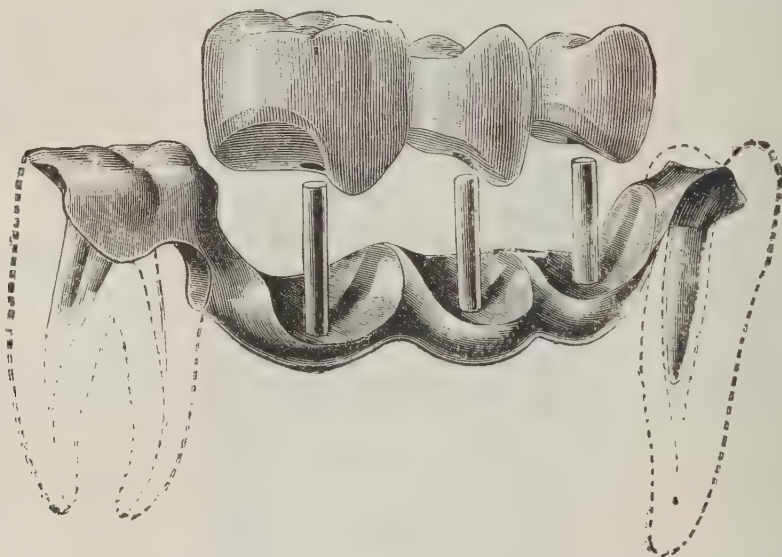
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Casting only.....	\$0.75
Gold.....	\$.05 per gr.

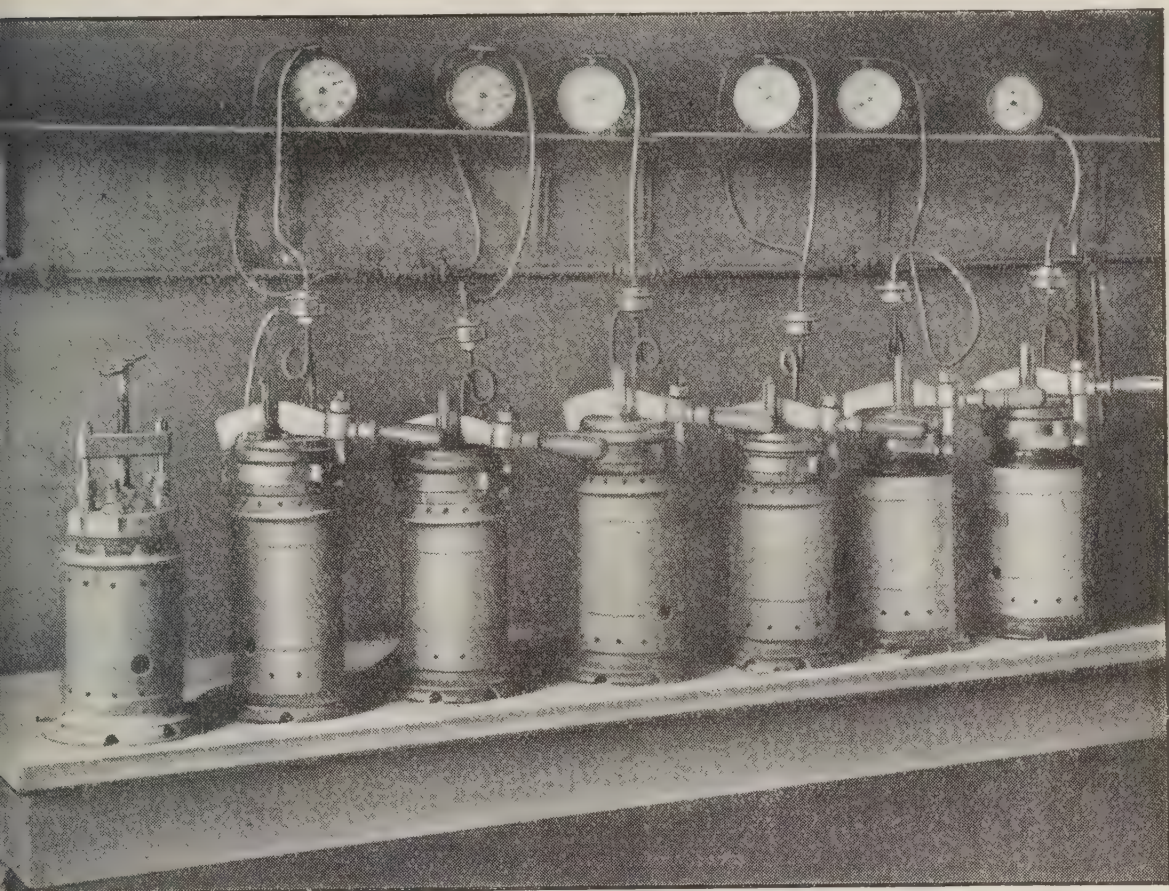
Rubber Dentures—	
Plate Work.....	\$2.50 to \$3.00
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Swaging metal plates (swag-	
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JUSTI TRUE TO NATURE TEETH

The great problem of prosthetic dentistry has been the proper articulation of artificial dentures, particularly the bicuspid and molars.

The “True to Nature Bicuspid and Molars” have solved the problem, as the interlocking of the uppers and lowers is perfect, each tooth fitting in its respective place, while the large occlusal surfaces insure proper mastication.

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Call for **“Justi’s True to Nature Teeth.”**

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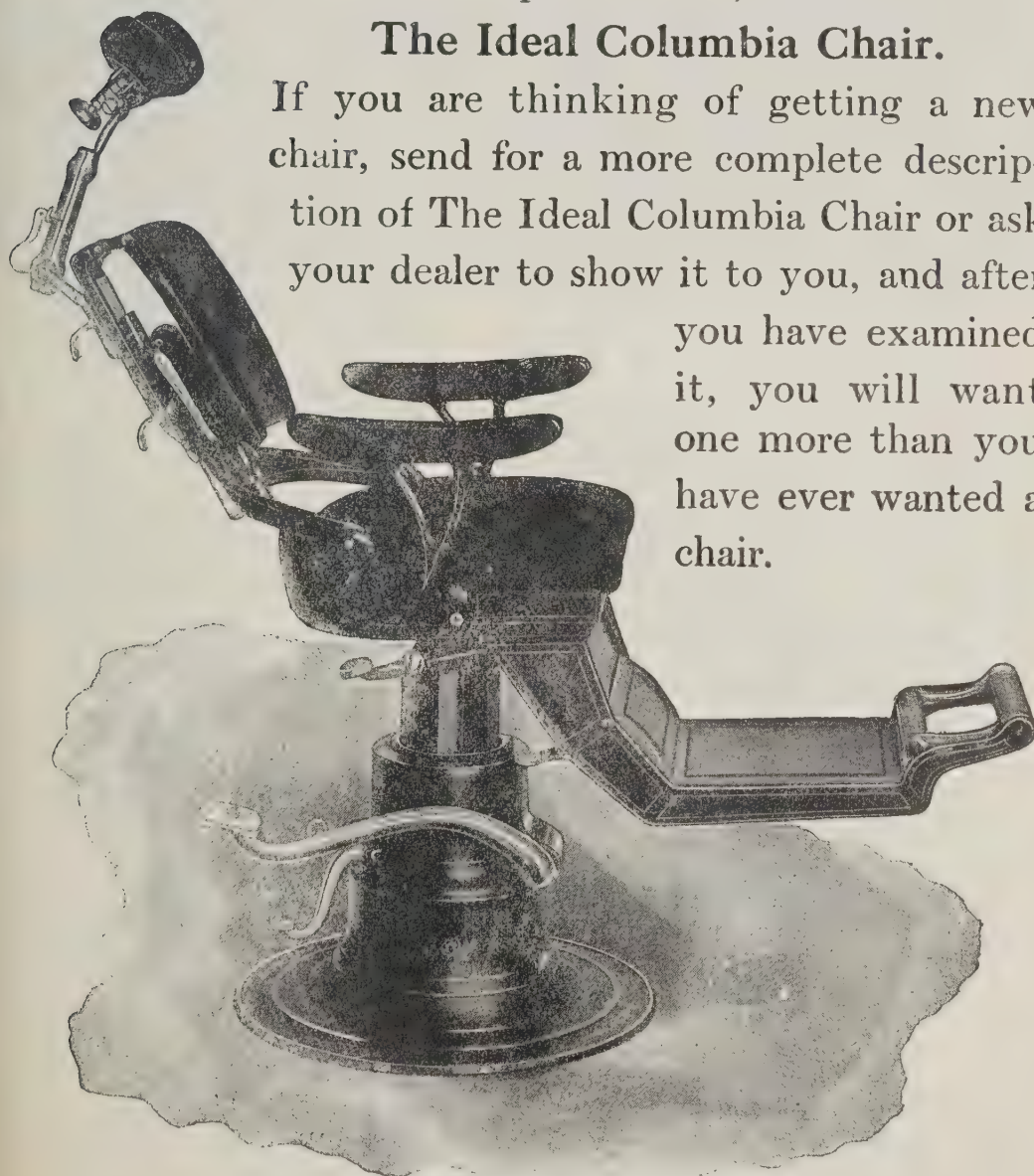
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If you are thinking of getting a new chair, send for a more complete description of The Ideal Columbia Chair or ask your dealer to show it to you, and after you have examined it, you will want one more than you have ever wanted a chair.



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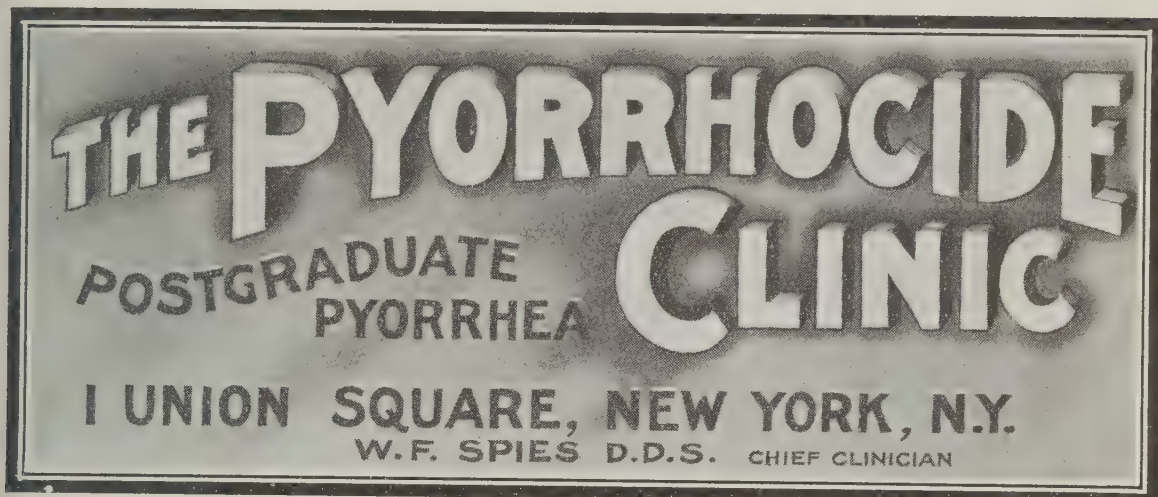
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If you anticipate buying

A Spittoon

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Buy the **best**. That means buy a

CLARK

Cost ~~no~~ more than the others.

A. C. CLARK & CO.

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AJAX FLOSS SILK

Sterilized



An extra strong thread, treated with sun-bleached beeswax, giving the silk a pure white clean color. It is also devoid of a strong wax odor. The inside wind is another attractive feature. The silk is thus withdrawn easily without jerking or tangling. The screw cap is fitted with a thread cutter. Ajax Floss Silk is put up as illustrated in strong glass tubes.

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—a very comprehensive, useful little book of things that you once learned and have forgotten; the little knacks taught only by experience and never included in a text-book; an indexed reminder of "just how you did it before;" **not** a treatise on the easy, obvious things in gold manipulation, but an orderly reminder of the way through the mean little jobs that you run up against.

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Dear Sirs;—

I received your booklet "Ney's Golds" and I want to tell you that it is an elegant advertisement. I learned from it some points about soldering that I ought to have known; and something about annealing both plate and filling gold.

I had a central porcelain facing to tip yesterday and I tried your "Safe Method" and I find that it is an improvement on the method I was using.

So, I was so pleased with the information you so kindly sent me, that I immediately sent in an order for an ounce of solder to Kansas City.

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W. H. Conner.

Send for "Ney's Gold Book."

THE J. M. NEY COMPANY
HARTFORD, CONN., U. S. A.

ASH'S Canadian Monthly Circular

Issued from Toronto on the First of each Month

VOL. II

MAY, 1912

No. 8

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CLAUDIUS ASH, SONS & CO., Limited

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Bicuspid only.
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You cannot get one hundred of
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of which all our teeth and crowns
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Our Moulds are the most natural, and the
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Claudius Ash, Sons & Co., Limited

Ash's Canadian Monthly Circular

VOL. II

TORONTO, MAY 1, 1912

No. 8

GYPSUM (PLASTER OF PARIS) IN RELATION TO ITS USES IN DENTISTRY.

By G. W. R.

Gypsum is a valuable mineral of a comparatively soft nature.⁷

The massive marble-like variety which is usually white, or delicately tinted and translucent, is called alabaster, the variety which is transparent and crystallized is known as selenite, and the variety which is fibrous and has a pearly opalescence is termed satin spar.

Gypsum contains 21 per cent. of water which can be driven off by heat. It is burned in kilns at a little below a temperature of 250° F. (121° C.) and afterwards ground to a fine powder, which is called plaster of Paris. This recombines with water, evolves heat, and quickly solidifies or sets. It is this property which makes it so eminently serviceable for dental purposes.

If in burning gypsum the temperature be raised as high or higher than 480° F. (250° C.), it loses the power of rehydration, and is then said to be dead-burnt, in which state it will not set when mixed with water.

For the sake of convenience, we will classify the uses of plaster of Paris in dental work under four headings:—

1. For Impressions;
2. For Models or Casts;
3. For Flasking;
4. For Vulcanizing.

1. FOR IMPRESSIONS.—Taking an impression of the mouth with plaster of Paris is not easy, as considerable difficulties attend the operation, and yet upon the accuracy with which it is accomplished depends the proper adaptation of the artificial denture.

Plaster of Paris is an excellent material for taking an exact impression, but it cannot be said to be indispensable for the purpose. Its great advantage is, that it causes no displacement of the tissues, i.e., no alteration in their relative positions, hence an accurate copy

of the parts of the mouth in their normal conditions can be secured, and, owing to its plastic condition, it can be pressed into the most minute spaces and irregularities. Further, when set, it is unalterable. It is, however, by reason of its rigidity, almost impossible to withdraw it from the mouth without fracturing it; still if the edges present clean, sharp fractures, they admit of accurate replacement in the impression tray, and an impression is thus obtained which is as nearly perfect as is possible.

In this connection it will perhaps not be out of place to add a few remarks in regard to the proper mixing of plaster of Paris. The best way to do this, is perhaps to describe how not to mix it. The worst possible method of mixing plaster of Paris, and one that is quite frequently adopted, is to take a basin, to put some water in it, to sprinkle the plaster of Paris into the water, pepper fashion until it is judged that sufficient plaster has been sprinkled in to make the model, and then to pour off the excess of water. This is a great mistake, because more than water is poured off; some of the crystallizing agents that should be left in the plaster in order to obtain the density which is needed are also poured off with it. When plaster of Paris is mixed in this way it takes much longer to harden than it does when water is not used in excess and it can be quite easily dented with the finger-nail.

The best results are obtained by adding sufficient plaster of Paris to take up all the water, and to whip it round the basin as briskly as possible—slow stirring retards the setting, and therefore is not good. Plaster of Paris of standard quality, properly mixed, yields a good hard model which will not rub away during the setting up of teeth.

It is important at all times to keep plaster of Paris at a uniform temperature of about 65° F. (18° C.) and when it is not in use to keep the container closed, because, should it be allowed to become damp, it will not harden to the same extent as when it is in a proper condition. Phillips's Plaster Sifter is one of the very best things ever introduced for holding plaster of Paris. It consists of a closed tin receptacle with a crank at the side for sifting the required amount of plaster into the mixing bowl, any lumpy pieces being reduced to powder by the grinding wheel above the sieve. This ensures an even mix free from blowholes.

2. FOR MODELS OR CASTS.—Before pouring a cast from a plaster impression it is important to soak thoroughly the surface of the impression with soapy water, Dividene, Dentistol, or other suitable separating fluid, as the plaster flows much more readily over a damp surface than a dry one, and it displaces moisture much more readily than air. Should the surface be dry and absorbent it

will extract some of the moisture from the plaster, and make the surface of the cast more or less faulty.

It is almost the universal custom when making casts which are to be used for rubber work, to make them as shallow as possible. This is doubtless due to the fact that most of the existing articulators and flasks will not admit of deep models being used; hence it has come to be regarded as the correct thing to make shallow models or casts.

We hope we shall not be misunderstood on this point; we do not mean to suggest that the use of shallow articulators and flasks should be discontinued; what we do say is that each model should be cast as deep as it is wide. After it has thoroughly crystallized it can of course be sawn down to any desired depth to suit existing articulators and flasks.

We have no hesitation in saying that the shallow model is one of the chief causes of bad fits; it does not give a true cast of the mouth, since the expansion of the plaster alters its shape: the expansion takes place laterally. For a model to give a true cast of the mouth it must be as deep as it is wide; the expansion is then equalized and no contraction takes place.

There are several factors which influence the amount of this expansion, viz., the quality of the plaster, the locality from which it is obtained, and the manner in which it is manipulated during mixing.

3. FOR FLASKING.—Owing to the pressure which is exerted upon the plaster in the flask, it is necessary that the plaster should be so manipulated that it will not be compressed during the subsequent stages. The plaster in the first section of the flask must be coated with a separating fluid. Oil should never be used for this purpose as it has a deleterious effect upon the rubber during the vulcanizing process; liquid silicic acid, Dividene, Dentistol, or soap is the best separating medium that can be used.

After the flask is filled it should stand until the plaster has thoroughly hardened; it should then be placed in a pan of cold water, slowly heated up to boiling point, taken out and separated. The wax should then be thoroughly scalded out with boiling water. A small lump of soda added to the water is an advantage. It is also most important, in order to secure the best results from the plaster, that dry heat should never be used; moist heat must be employed throughout the sequence of flasking.

4. FOR VULCANIZING.—In order to obtain the best results in vulcanizing rubber it is necessary to be very careful in regard to detail. The time required for vulcanizing entirely depends upon the medium which is employed—water, saturated steam, or pure steam.

Vulcanization begins about 250° F. (121° C.); sulphur melts at from 250°—270° F. (121°—132° C.), and vulcanization takes place from these temperatures and upwards, but at these low temperatures it would take many hours to complete the process. The temperature usually employed is 315° F. (157° C.) for 75 minutes; yet even at this temperature much depends upon the position of the flask in the boiler. For instance, should three flasks, each of which contains a rubber denture of exactly the same size and shape, be placed in a vulcanizer, three different results can be obtained owing to the position of the flasks in the boiler. If flask No. 1 be placed at the bottom of the boiler in water, No. 2 in the middle in saturated steam, and No. 3 at the top in pure steam, we find, after vulcanization, when they are taken out of the boiler that the denture in the top flask, which was cooked in pure steam, is beautifully vulcanized and flexible, that the denture in the middle flask is not so flexible, while the denture in the bottom flask, which was vulcanized in water, is overdone and brittle. These varied results are due to the determined physical law that water is a better conductor of heat than saturated steam, and saturated steam than pure steam. Further, water and saturated steam have a great affinity for sulphuretted hydrogen, hence a more rapid chemical change takes place under them than under pure steam, and this is very undesirable, inasmuch as brittle rather than tough vulcanite is the result.

Mr. Rippon, of Dewsbury, says:—"In order to obtain the best results in vulcanizing dental rubbers it is necessary to understand thoroughly the nature and properties of steam. The fact should be borne in mind that a vulcanizer is subject to the same laws and conditions as a steam boiler, which it is in fact, and although it is comparatively safe and easily operated, it may, by carelessness or ignorance in its management, become exceedingly dangerous.

"At sea-level the pressure of the atmosphere is 14.7 lbs. to the square inch.

"At that pressure water boils or passes into steam at a temperature of 212° F. (100° C.). As the atmospheric pressure is reduced, so does water boil or pass into steam at lower temperatures than 212° F. (100° C.).

"Conversely, as the atmospheric pressure is increased, so the temperature has to be greater than 212° F. (100° C.) before water boils.

"Again, in a boiler, such as a vulcanizer, where steam has been produced and the temperature registers say 275° F. (135° C.), the pressure will be 45 lbs. Before the contained water can be further boiled, or more steam generated; the temperature must be increased to enable the water to pass into steam.

"Further, for every different pressure there is a fixed temperature at which water boils, hence water has an indefinite number of boiling points, which vary with the difference in pressure. Thus:—

The absolute pressure being:—

5	lbs.,	the boiling point of water is	162° F.,	72° C.
10	"	"	193° F.,	89° C.
14.7	"	"	212° F.,	100 °C.
29.4	"	"	249° F.,	121° C.
44.1	"	"	273° F.,	134° C.

It will be clear that the temperature at which water can be converted into steam depends on the pressure upon the water, whether that pressure be the weight of the atmosphere to begin with, or the pressure of the steam within a closed vulcanizer.

"When steam is confined in a closed vessel, and is in contact with the water that produces it, the effort by which it endeavors to expand itself and to enlarge its volume, or to separate the parts of the vessel which confines it, and set itself free, is called the elastic force of the steam and is the equivalent of its pressure. When the temperature of the steam is increased the elastic force or pressure is also increased, and the ratio between pressure and temperature can be expressed by a mathematical law or principle.

"Steam may exist in two conditions, and the ratio of temperature and pressure is different in each. These two conditions of steam are:—

- (a) Saturated steam.
- (b) Superheated steam.

"Steam in contact with water is said to be saturated, and when the temperature of the water and steam is raised the pressure is largely increased by each degree of temperature.

"Steam which exists separately from water, that is when all the water in a closed vessel has been converted into steam, may be raised to a higher temperature, when it is termed superheated steam. Superheated steam may be defined as steam raised to a temperature above the boiling point corresponding to its pressure.

"Superheated steam behaves as a perfect gas, and the pressure increases at a sensibly uniform rate with the temperature, this being done without producing a dangerous pressure.

"To vulcanize by means of superheated steam the thermometer and not the pressure gauge must be the guide. Therefore, in practice, saturated steam is used in vulcanizing, when the thermometer and pressure gauge may be used together, one to check the other."

At 212° F. (100° C.) water begins to boil. In this state it is called steam, although there is no essential difference between

steam at 212° F. (100° C.) and steam at 60° F. (16° C.), except that there is more latent heat in the one than in the other.

When water is boiled in an open vessel under normal conditions, neither the temperature of the water nor the steam ever rises higher than 212° F. (100° C.) except when under pressure; but both can then be raised to any degree.

The great object to be attained in vulcanizing is not to see in how short a time the wonderful chemical changes which take place during the process can be effected, but to conduct the operation in such a way as to secure the greatest possible amount of strength and elasticity in the rubber.

We would therefor emphasize the importance of careful attention being given to details, in order to obtain the best results from rubber and plaster, since it is only under the most favorable conditions that rubber for dental purposes can be successfully and satisfactorily vulcanized.

Before finally closing down the lid of the vulcanizer with the spanner, with a half turn or less of the screw, after it is heated up, the steam tap should be opened and allowed to remain open until the condensed steam and air have escaped; the thermometer will then register the correct temperature.

Second-Hand Goods

1 Harvard Mechanical Chair, good condition.....	\$70 00
1 Columbia Chair, Maroon Plush, in excellent working order. This Chair is in Maritime Provinces.....	70 00
1 Davis Gasometer, less Face Piece and Tubing, Excellent Condition...	18 00
1 Cabinet, No. 57, American Cabinet Co's, in A-1 Condition.....	65 00
5 Elgin Casting Machines, practically new, each.....	25 00
1 Harvard Mechanical Chair, A-1 Condition }	80 00
1 Wall Bracket and Table..... }	
1 Sharp Seamless Crown Outfit.....	40 00
1 Wetherby Suction Machine (new style) in A-1 Condition.....	25 00
1 Sharp Seamless Crown Outfit.....	40 00
1 Ritter Caustic Potash Engine. All Cord Overhead type. 12 Cells with Rectifier and Voltmeter. Practically new.....	160 00

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Why not send us a deposit NOW.

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Dental Practice—Town of Barrie, Ont., Office of the late Dr. MacLaren, satisfactory terms for quick sale. Apply Claudius Ash, Sons & Co., Toronto, Ont.

Dental Practice—In thriving Town 100 miles from Toronto. Good opening. Apply Ash & Sons.

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Dental Practice—In Eastern Ontario. \$3,500 per annum. Good opening for young man. First Class Equipment. Good Condition.

Ash's Dental Rubbers

Are the best in the world and are the standard by which all others are judged.

NOTE.—Our Rubbers weigh 16 ozs. to the pound, exclusive of linen backing and box.

FOR COATING

	Per lb.	5-lb. lots	10-lb. lots	20-lb. lots
New Pink, Medium.....				
No. 1X Pink, Medium.....				
No. 1 Pink, Light.....	\$6.00	\$5.40	\$5.00	\$4.75
Gum Pink, Medium.....				
Gum Pink, Light.....				
No. 2 X Pink, Medium.....				
English Pink, Medium.....	5.00	4.50	4.25	4.00
English Pink, Light.....				

FOR BASE

Improved Black.....		
Combination.....		
White for Side Blocks, etc.....		
Child's "G".....	4.25	3.80
A. E. Elastic, Dark Brown.....		
W. Elastic, Dark Brown.....		
Whalebone No. 1, Dark Brown.....		
Whalebone No. 2, Light Brown.....	3.75	3.35
Solid Base.....		
Dark Red.....		
Flexible Base.....	3.50	3.15
Dark Elastic.....		
Maroon.....		
Red.....		
Orange.....		
Dark Brown.....	3.00	2.70
Brown.....		
English Base.....		

SPECIAL—FOR TENDER GUMS, ETC.

	Degree Fahrenheit	Time H	M	lb.
Soft Pink, for lining Palates.....	310	1	15	\$6.00
Soft Dark Red.....	310	1	15	4.25
Vela for Artificial Palates.....	270	6	0	6.00
Brown Weighted				4.25
Pink Weighted				6.00
Brown Repairing				4.75
Pink Repairing				6.00

NOTE.—Cash Discounts do not apply on quantity rates on our Coating Rubbers in any quantity over 5 lbs.

CLAUDIUS ASH, SONS & CO. LTD.

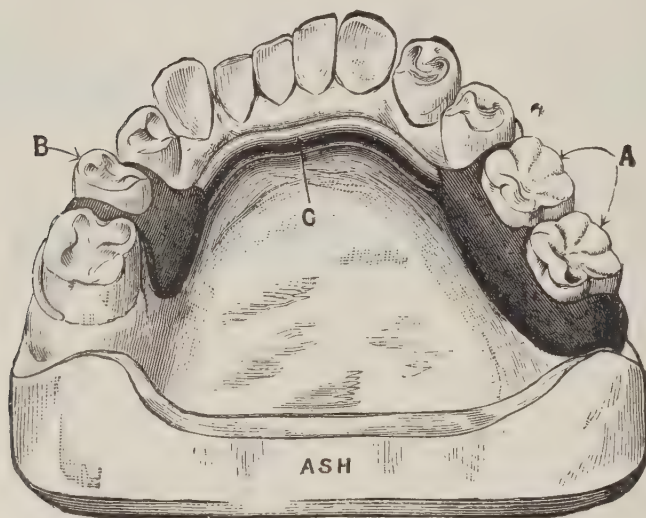
New Prices for Stents Impression Compound

Per box.....	.40
6 boxes.....	2.20
12 boxes.....	4.20
20 boxes.....	6.50

This compound is the most reliable on the market, and has stood the test of time. If you have not used it, send us a request postal for a sample.

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Ash's Oval Gold Cased Wire FOR BAR LOWERS



Bar Lower Dentures have come into universal demand. Note some of their advantages.

No tendency to push teeth outwards.

Greater cleanliness.

Less bulk.

Greater rigidity.

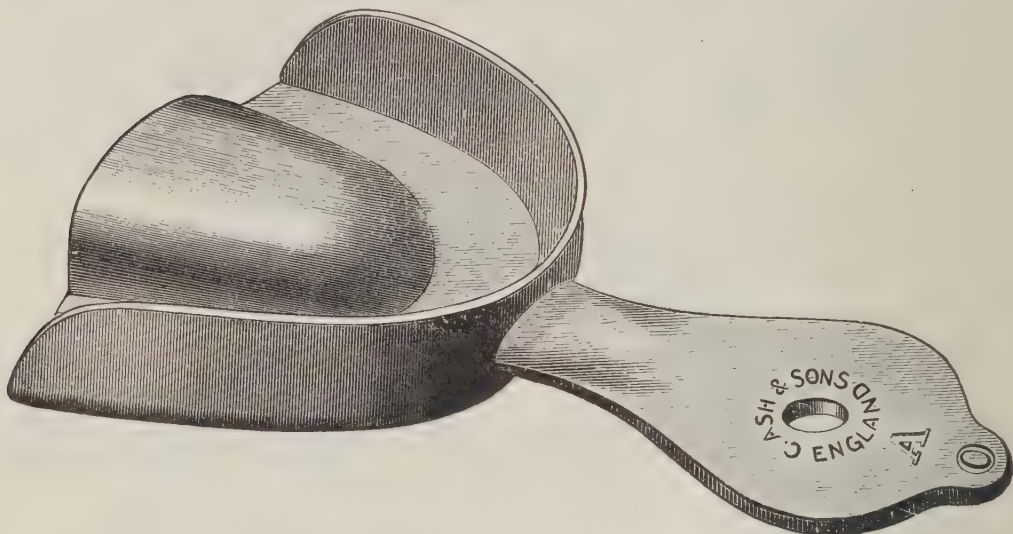
Per dwt. \$.40

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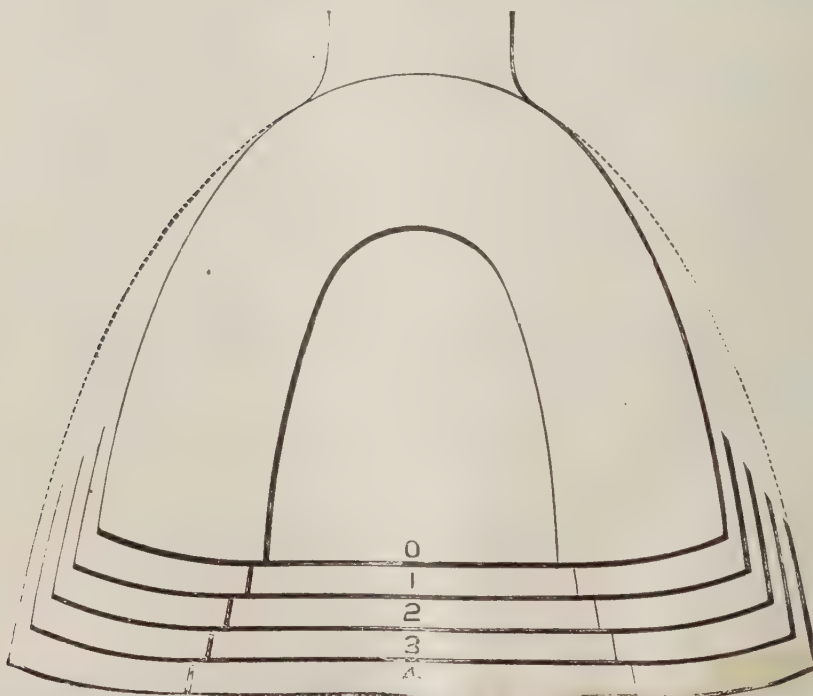
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UPPER IMPRESSION STYLE "A"

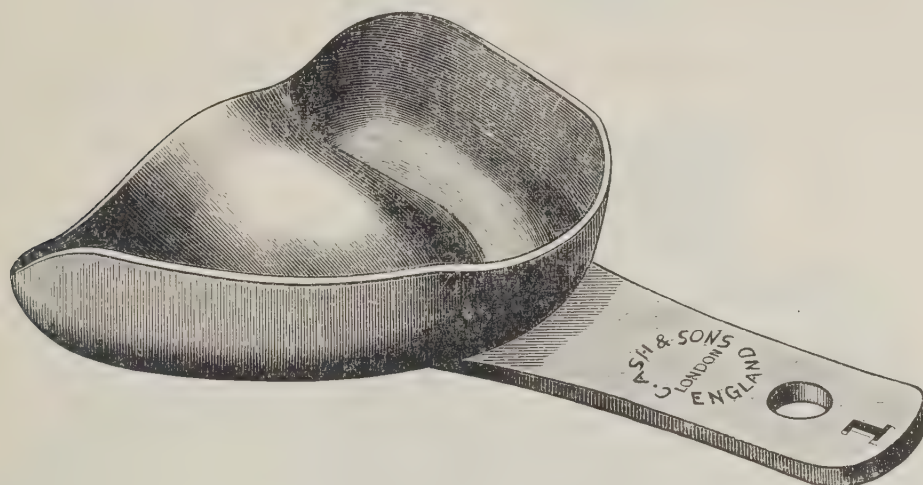
Depth of Tray, 5-8 in. Height of Palate, $\frac{1}{2}$ in.



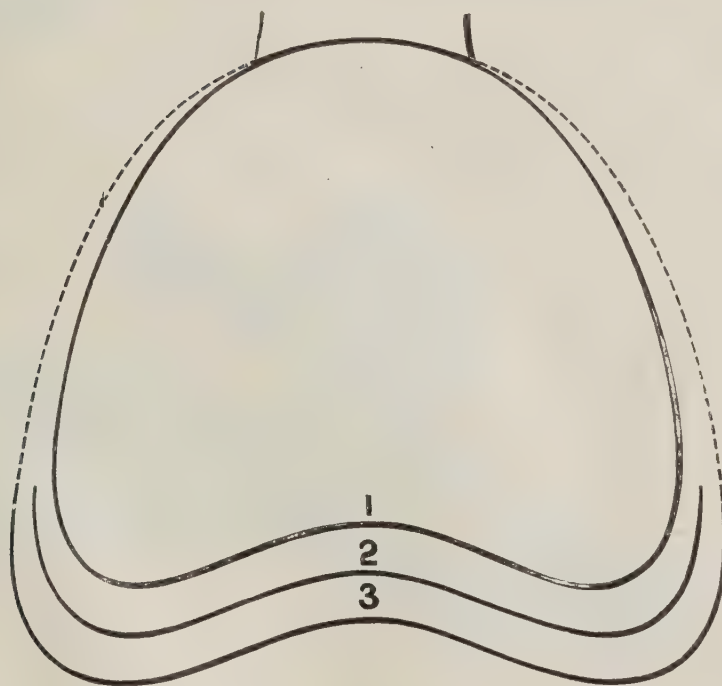
Sizes 1 and 3 in Set B.



UPPER IMPRESSION TRAY "ANATOMICAL."

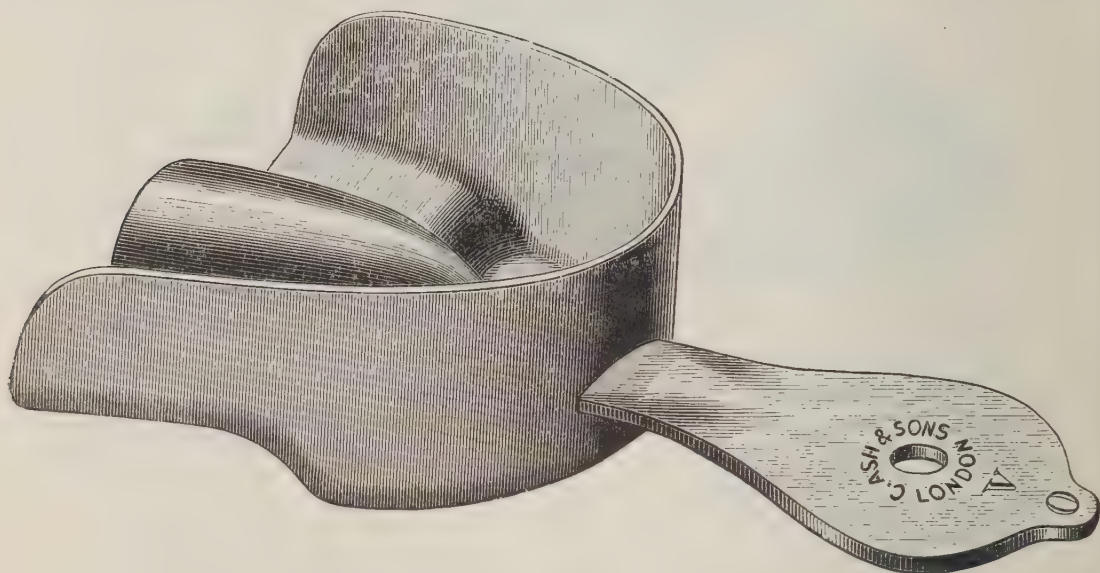


Sizes 2 and 3 in Set B.

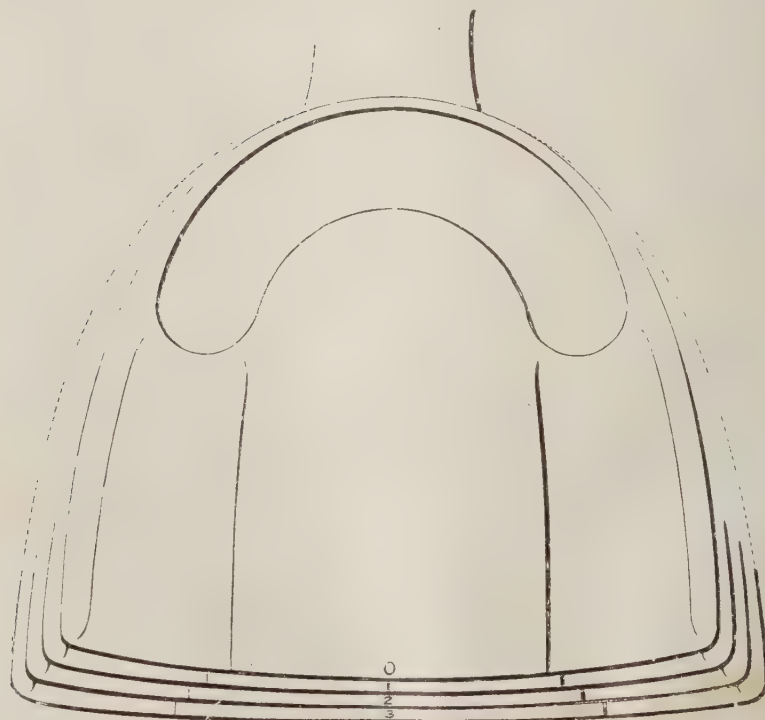


UPPER IMPRESSION TRAY—STYLE “V” WITH
WELL IN FRONT.

Depth of Tray, 5-8 in. Depth of Well, 7-8 in. Height of Palate, $\frac{1}{2}$ in.



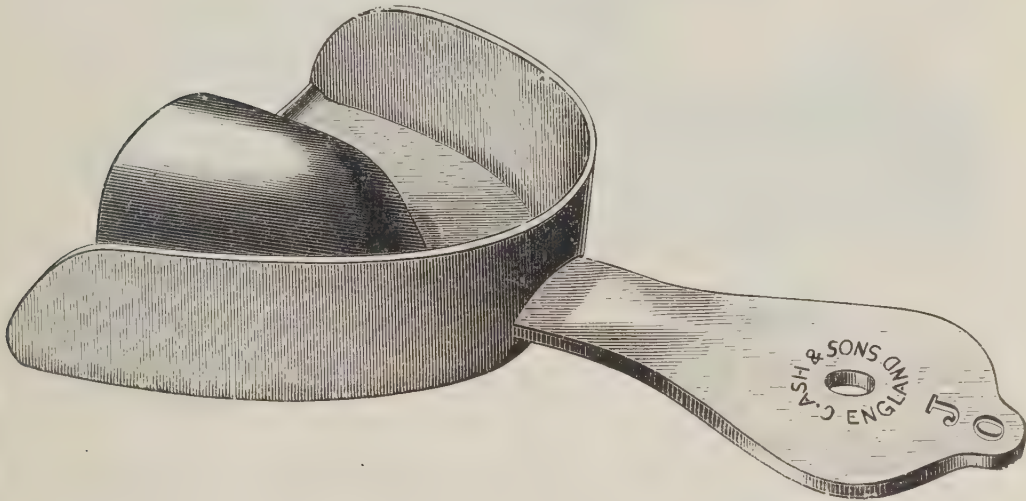
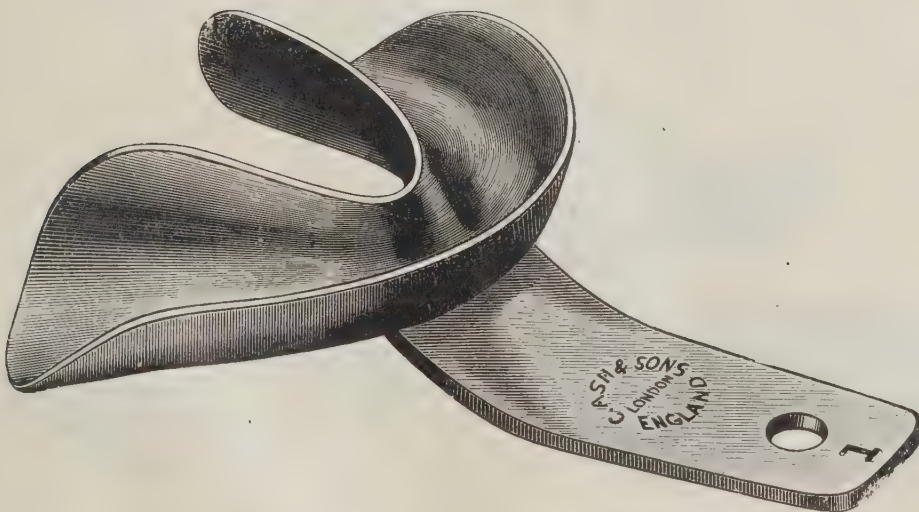
Sizes 1 and 2 in Set B.



UPPER IMPRESSION TRAY—STYLE “J”

with narrow Palate, and slightly turned up ends.

Depth of Tray, 5-8in. Height of Palate, 9-16in.

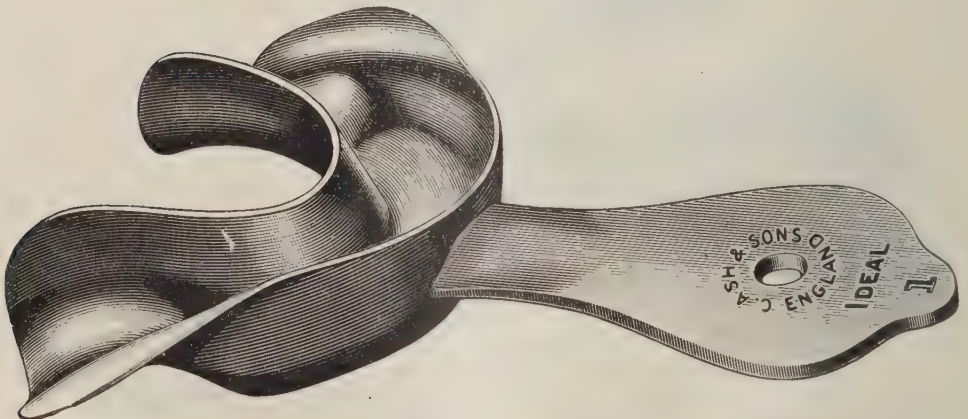
**LOWER IMPRESSION TRAY “ANATOMICAL”**

LOWER IMPRESSION TRAY STYLE "EVS."

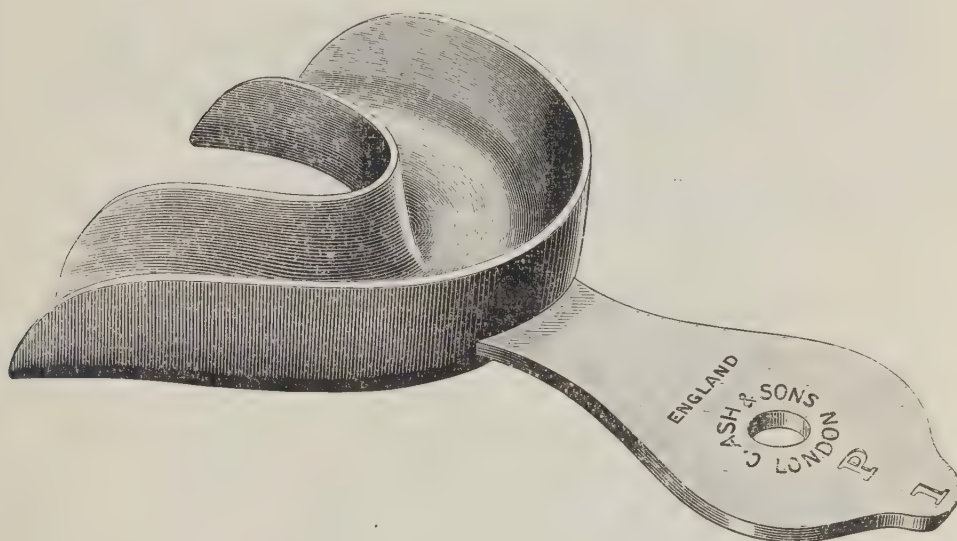
Very shallow for edentulous cases.

**LOWER IMPRESSION TRAY—STYLE "IDEAL."**

With Well in front, deep inner Wall, and with
outer wall flattened on each side
at the back.



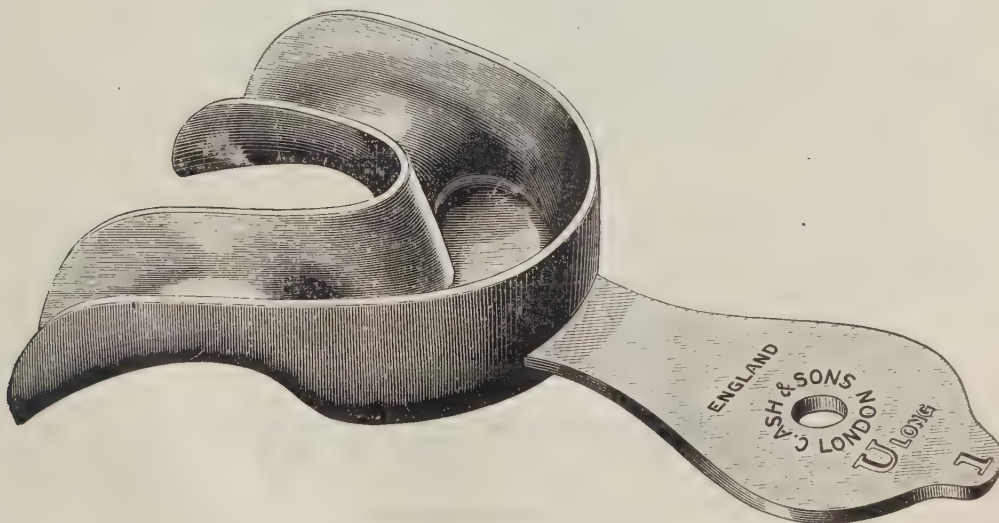
LOWER IMPRESSION TRAY STYLE "P".



LOWER IMPRESSION TRAY STYLE "U. LONG."

Depth of ends, 7-16 in.

Depth of Well, 11-16 in.



GALLOWAY'S SUCTION DEVICE

FOR LOWER DENTURES ONLY

Patented in United Kingdom and U.S.

Other Patents Pending.

This Suction is the most satisfactory ever offered. It consists of a curved metal bar, which has counter sunk holes in it for four pins to secure it to a plaster model, and a vulcanized strip of Ash's specially prepared Vela Rubber which so well withstands the oral fluids.

This Rubber Strip is held in position in the denture by the suction which is produced by the small holes on the curved surface and to the gum by the suction through the larger holes on the flat surface. The Strip can be removed and cleansed, and replaced in half a minute.

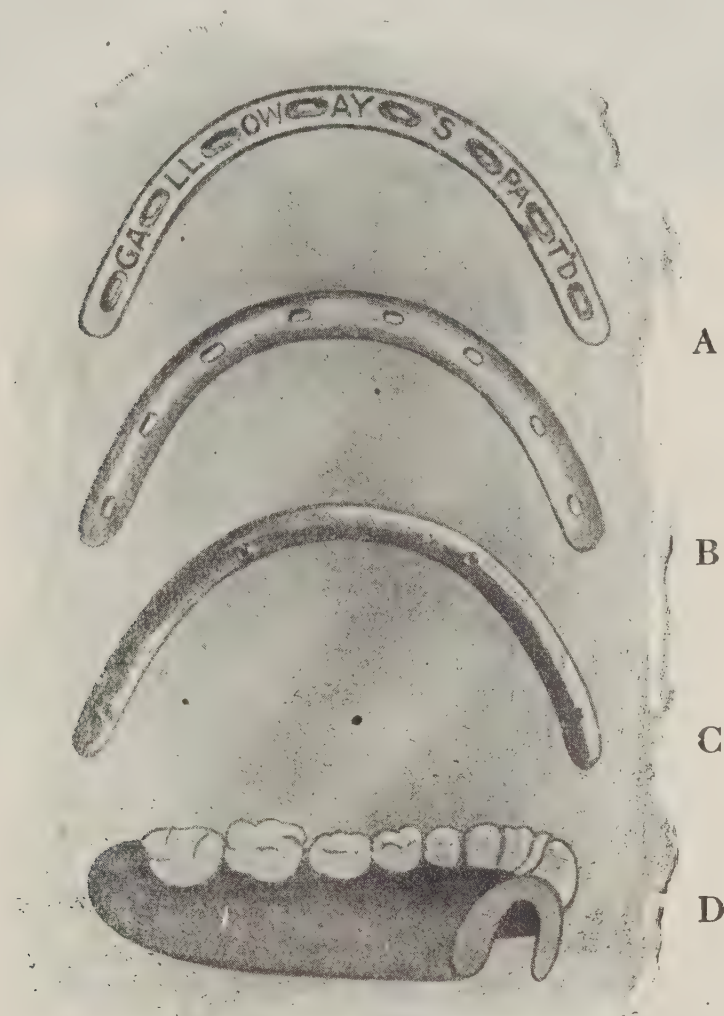
The device is cleanly and secures the denture properly without any discomfort to the patient.

PRICE \$1.00

Sole Agents—

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GALLOWAY'S SUCTION DEVICE FOR LOWER DENTURES ONLY—continued.



Natural size.

A and **B** show the flat and rounded surfaces of the rubber strip and the holes which serve to retain the denture in position in the mouth.

C—Metal bar with countersunk holes into which the heads of the pins should be firmly pressed.

D—Vulcanite blank which shows the rubber strip in position.

Price.....\$1.00 each

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CLAUDIUS ASH, SONS & CO., LTD.



Makes the im-
practical in cast-
ings easy and
accurate.



These two patterns
are en-meshed di-
rectly in the mouth,
readjusted as many
times as desired
and removed from
the root without
distortion.

FEATURES.

Correct Root Base—Coping with or without Band—Pure
Gold Casting with Alloyed Edge—Uniform Results.

Instructive literature for many other uses upon request.

Price, \$1.15 sq. in., Canada.

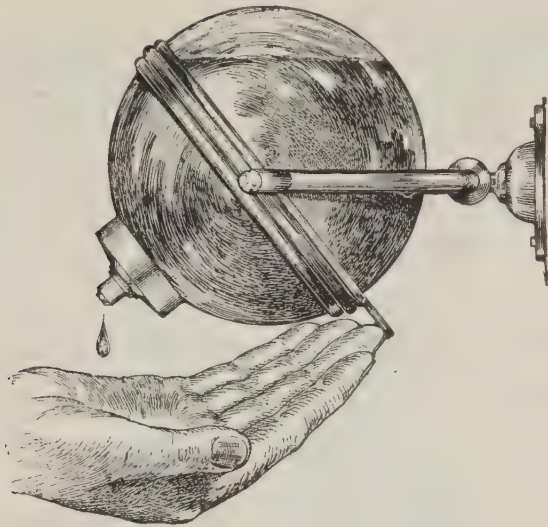
Sizes, 5 sq. in., 2½ sq. in.

Tatham Gold Mesh Company

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THE ONLY ASEPTIC WAY OF USING SOAP

Is by means of the BEAU BRUMMEL LIQUID SOAP DISPENSER, the only mechanically-perfect, successful device which furnishes a measured quantity of absolutely uncontaminated soap from a practically air-tight dispenser, each time it is used.

Embellishes the washstands, eliminates soap waste and mussy soap dishes. Requires no care and attention.

As for the soap itself, we have perfected practically a neutral soap, which being prepared from pure vegetable oils, is the purest form of soap that can be had, free from acids, animal fats and tallow, and it is not only a better detergent and cleanser than cake soap, but is an emolient to the skin, refreshing, stimulating and invigorating.

The Beau Brummel Liquid Soap System is the only one whereby the Dentist can assure absolute asepsis in using soap, in his offices.

We have just put out a nice equipment in a hinged hard-wood box containing

1 Soap Holder	}	\$6 00
$\frac{1}{2}$ gallon Perfumed Soap for		

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WHAT YOU HAVE SO OFTEN ASKED FOR

A POPULAR TEMPORARY STOPPING AT
30 CENTS A BOX

It's a good guttapercha, scientifically prepared,
and it will please you as it has
satisfied many others

WE MAKE A QUANTITY RATE OF 6 BOXES
FOR \$1.50

SEND US AN ORDER NOW

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CAST ALUMINUM PLATES

BY PLATSCHICK STEAM SYSTEM
FIT AND QUALITY GUARANTEED

ALL CLASSES OF MECHANICAL WORK

FOR THE DENTAL PROFESSION

SEND FOR PRICE LIST

THE MONARCH DENTAL LABORATORY

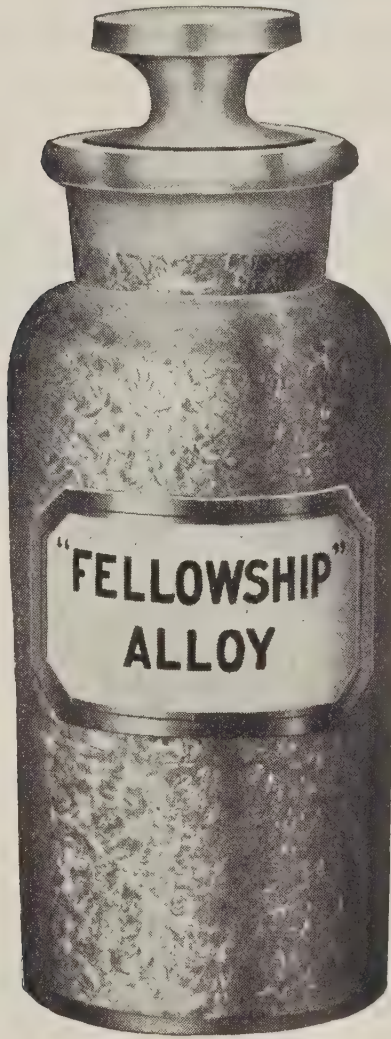
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Learn to say Fellowship

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MANUFACTURED BY

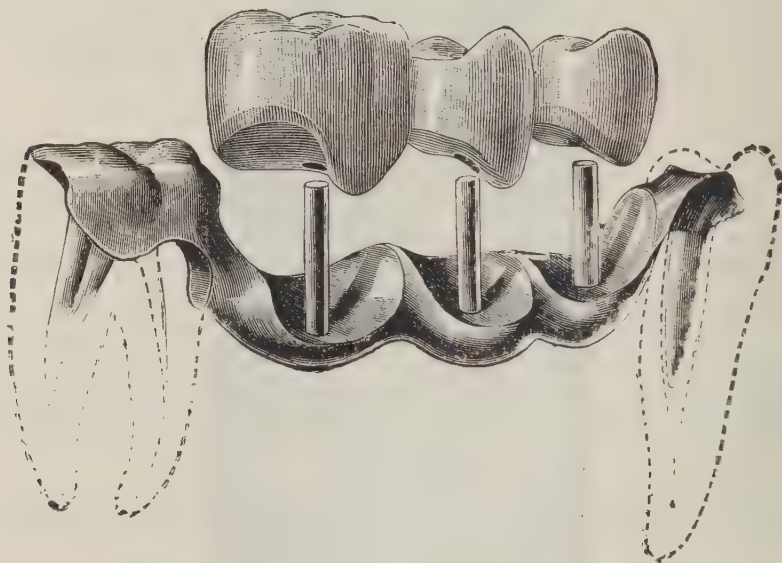
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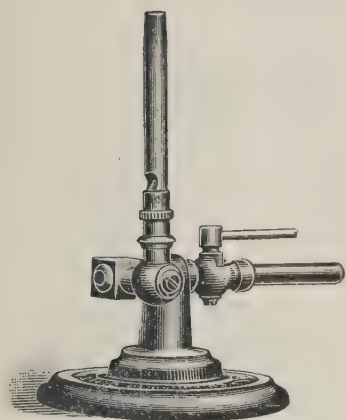
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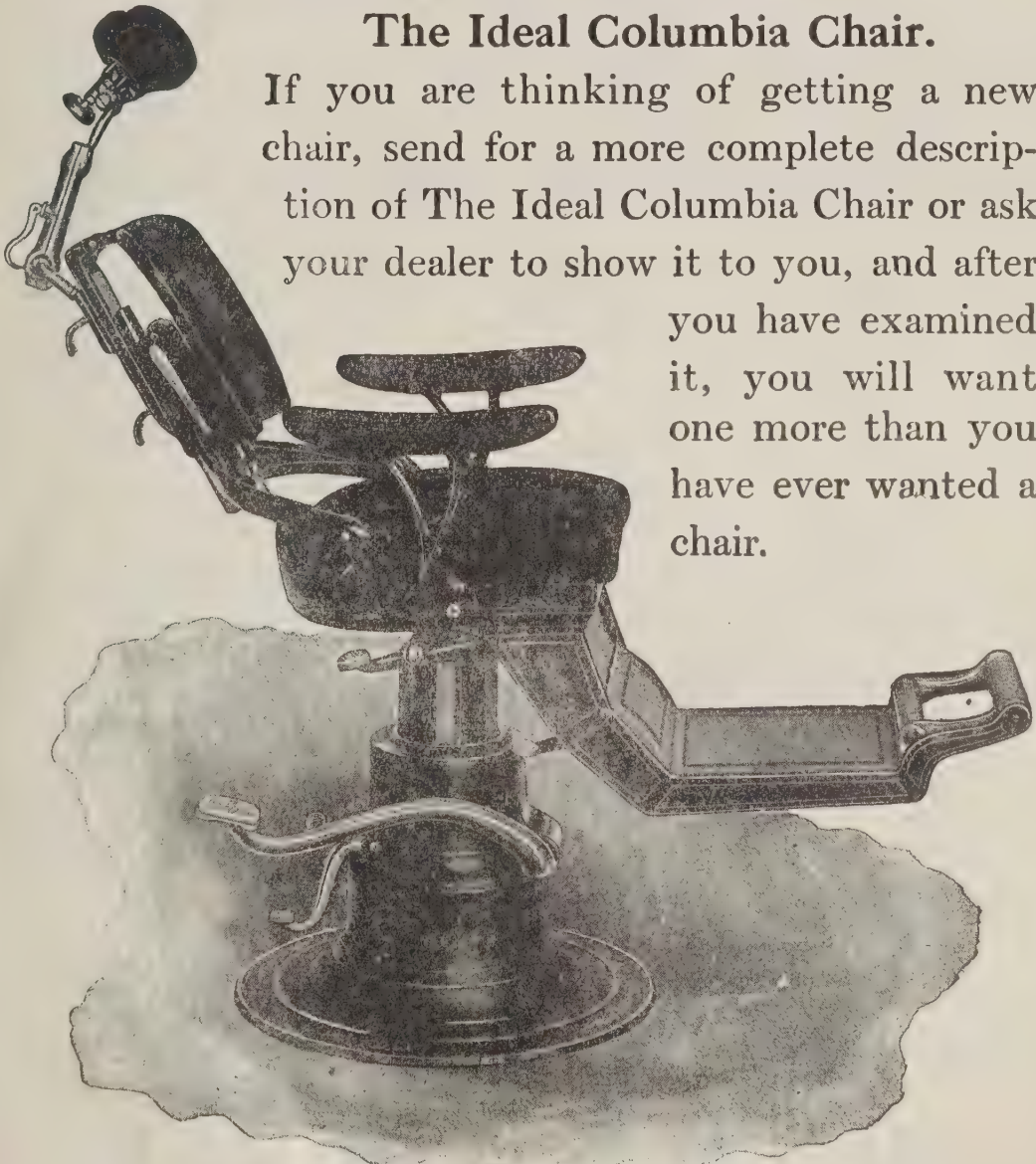
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ASH'S Canadian Monthly Circular

Issued from Toronto on the First of each Month

VOL. II

JUNE, 1912

No. 9

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Treatment and Cure of Alveolo-Dental Pyorrhœa
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VOL. II

TORONTO, JUNE 1, 1912

No 9.

TREATMENT AND CURE OF ALVEOLO-DENTAL PYORRHŒA BY MEANS OF ALTO-FREQUENT EFFLUVATION.

By F. MOREL, *Surgeon-Dentist of the Faculty of Medicine of Paris,*
Surgeon-Dentist to the Civil Hospital of Dreux.

If there is a disease in our specialty which has caused rivers of ink to flow, it is surely alveolo-dental pyorrhœa, as much owing to its problematical etiology, its complex pathological and histological processus, as by its resistance to treatment and its desperate chronicity. Its pathogenic and histological processus is known to you; you are aware of the causes of its anatomo-pathology.

1. *Diathesis*: Arthritism, sanguineous stasis, uric diathesis.

2. *Pathological*: Albuminuria, diabetes, syphilis, locomotor-ataxy, anæmia, chlorosis, gout, etc.

3. *Traumatic*: Action of tartar, accidental or natural anomalies, defective prosthetic apparatus, bridges, crowns, faulty regulation, etc.

4. *Microbian*: In regard to this, I will enter into some details, because I have made researches which are of a nature to clear up this obscure portion of the etiology of pyorrhœa. On examining pyorrhœic pus bacteriologically, we find leucocytes, mono- or polynuclear, eosinophyles, conjunctive or epithelious cellules, and a large number of microbes, amongst which are *staphylococcus pyogenes aureus*, *streptococcus pyogenes aureus* and *albus*. All authors agree in saying that there is no special microbe of alveolar pyorrhœa properly so called. To make amends for being in contradiction with them I will give you the results of some personal researches. I proceeded to the microscopical examination of more than a thousand pyorrhœic samples of pus, and as the result of a profound bacteriological investigation of these exudations I can affirm that for every hundred samples of pyorrhœic pus taken from different subjects

*Translated from *Bulletin du Syndicat Chirurgiens-Dentistes de France*.

in periods of a more or less advanced state of the malady, I found in ninety-eight cases, in addition to other microbes, a notable, although very variable, proportion of *tetragenous micrococci*. I observed at the same time another microbe of the *coccus* form, analogous to the *tetragenous*, as an element of formation, but the cocci of which, in lieu of being grouped in squares of four, are united in fives by fives or in triangles of three. To me, this microbial form has the appearance of a hybrid of the *tetragenous*, but I believe that I am the first to note its presence, and since, notwithstanding careful research, I have found no trace of it in any author. I isolated these hybrids; I made cultures of them, and with which I inoculated guinea pigs and rabbits; but, apart from a slight ulcer, followed by a scab, I did not obtain clear results from the point of view of inoculation. If, on the other hand, I made a common culture of the *tetragenous*, of its hybrids the *triagenous* and the *quinquagenous*, I obtained a much more virulent culture than with the *tetragenous* alone; and my inoculations upon guinea pigs and white mice caused their death in twenty-four hours by generalised septicæmia with hyperæmia, ulcers or pustules at the point of inoculation. To my mind these hybrids are special to pyorrhœa, and I have, up to now, been unable to find any trace of them in other pus. I am pursuing these researches, and I hope to be able in a little while to affirm this priority of the action of the hybrids, the *triagenous* and the *quinquagenous*, in the etiology of alveolar pyorrhœa.

I will, on the other hand, recall to you my experiences of the destruction of the tetragenous micrococci and their toxines by means of the currents of high frequency upon which I have already discoursed to you at the *Congress of Poitiers*; in order to economise the few moments at my disposal I would recommend you to read the paper to which I have referred.

Now, in regard to the causes; the most thorny question at present before us is the one I propose to deal with to-day, viz., the treatment of pyorrhœa.

One point upon which all modern authors are in accord is the need for duality of treatment, which ought to comprise general and local treatment.

As it is positive that pyorrhœa is the result of general and local condition, it would be childish to adopt local treatment exclusively. The knowledge which we possess in regard to this disease shows that we must absolutely renounce routine practice and treat each case in its causal aspect according to the special features which it presents. The diathesis, we know, exercises a disadvantageous influence; certain pathological conditions, such as diabetes, albuminuria, gravel, gout, etc., are etiological factors of

which it is convenient to take account. The first thing to do is to make an *analysis of the urine*; this will often enable you to establish the real origin of the affection. By means of such urological analysis we shall know the defective elimination of the salts of lime, of the urates, the super-production of uric acid—characteristic symptoms of arthritism; thus we shall know to what is due the sanguineous stasis and the sclerosis of the tissues. This analysis will also explain the presence of an abnormal quantity of sugar in diabetic dyscrasia, the albumin in albuminurics, etc. It will, finally, reveal to us the hereditary conditions of the subject, and, according to the result which we shall have attained, we may submit the patient to a serious medical examination. The practitioner too often forgets that the metabolic, diathetic, or pathological troubles, when they are prolonged, determine changes in the vaso-motor centres which cause suppuration and death of the tissues. It is necessary to combat the diathesis and the predisposing maladies in accordance with all the resources of art, and to prescribe a rational tonic treatment for all the diseases which diminish the vitality of the individual. It is only after having undertaken this general treatment that we are able to hope to overcome the affection by local treatment.

But what ought to be this treatment? This is, perhaps, the point which divides the greater number of authors who have written on this question. The therapeutic means devised against alveolar pyorrhœa vary with each writer; that is, if the methods are numerous and diverse. I do not pretend to explain them all, convinced as I am of the uselessness of the task; many of the methods of treatment have already been abandoned. All the same, as I am about to criticise divers therapeutics now in vogue, and to form conclusions in regard to their real value, I ought to cite those which are employed in the treatment of alveolar pyorrhœa at the present time.

Some employ diluted chromic acid down to the base of the diseased alveoli; others use Nordhausen's sulphuric acid, solutions of nitrate of silver, lactic acid, etc. Monsieur Kritchewsky proposes fluoram. Drs. Frey and Névrezé only admit solid and soluble lactic ferments applied locally to the infected parts: they have found antagonism between the lactic poly-microbism and that of pyorrhœa, and they have conceived the idea of opposing to the pathogenic microbes of the mouth, microbes capable of proliferating in the mouth while being inoffensive in regard to the teeth; this, however, I doubt, for certain reasons. Notwithstanding my doubt, I frequently associate as a prophylactic regime this method of mine. Others, again, speak of performing excision of the pulp of the teeth which are affected, because they say that devitalisation of such

teeth induces modifications in the alveolo-dental circulation which bring about good results in the evolution of pyorrhœa(?). I take the liberty of putting a note of interrogation against this idea, as I have no desire to be pontifical, nor to be disobliging to anyone; but, nevertheless, will these gentlemen permit me to say that they bring about, more rapidly than pyorrhœa could, the death of the tooth and its consecutive expulsion? Others, finally—among them *Bonwill* and *Loriot*—correct the defective articulation, and I am on their side. All, or nearly all, recommend curetting the intra-alveolar diseased teeth with very fine instruments until they have removed all the tartar, down to the smallest particle. To these practitioners I wish every success, but I think they are on the wrong track, and this I will presently endeavor to prove.

I ought to reserve a pleasant word for *Fleischmann*, who suggests massage, which ameliorates the peripheral circulation, and I am absolutely convinced of the excellence of this procedure; but great care must be taken not to practise massage after the suppuration has ceased, if we do not wish to expose ourselves to the aggravation of the evil, by forcing the pyorrhœic pus on to the neighboring teeth, which will be contaminated, or into the depth of the gums.

Finally, it is certain that one of the causes which we shall have most often to combat will be the wearing of defective dentures. We must not hesitate to re-make an injurious prosthetic piece. It must be re-made accurately from an impression taken in plaster of Paris, in order that it may hold without bands, if possible, and without suction. We shall thus avoid every cause of irritation, of mechanical abrasion, and of traumatism, which predispose to pyorrhœa.

These are, then, at the present time, the chief therapeutic measures proposed for the local treatment—measures which are generally powerless, very much discussed, very much debated, without any efficacious treatment being clearly established, and without any serious solution that will lead to the definite cure of the disease.

From whatever side we may approach the problem of the local treatment of pyorrhœa, we shall infallibly come upon the fact that we must destroy the microbial and suppurative condition of the alveoli, to correct the slackening of the nutrition of the tissues, by producing a phagocytary super-activity, to augment the indication of destruction of the leucocytes—in a word, to reorganize the army of defence which, for a moment, has been put to flight by the infection, and to insure its final triumph. In order to arrive at this result and to overcome this affection, so redoubtable in its consequences, I have taken in hand the currents of high frequency in

two of their physical expressions—effluviation and sparking. While the spark does not serve us, except in very advanced cases, for the destruction of purulent pockets, under the form of minor conflagration—a reduction of the major conflagration which I have applied to cysts, buccal abscesses, and neoplasms—the effluves, on the contrary, are employed for grave cases of pyorrhœa, of however long standing they may be. The therapeutic power of these effluves is complex and outside the curative properties which I have just enumerated. I dissociate myself from the majority of authors in regard to the chemical reactional power which the effluves exercise upon the bodies through which they pass. Thus, while these authors ascribe to the effluves of high frequency physiological and bactericidal properties, and deny them every chemical property, I am in a position to-day, in consequence of the numerous experiments which I have made, to prove that to these properties we ought to add the properties *ana* and *cataphoretic*, and that, on the contrary, it is necessary to deny these properties to the continuous current. The cataphoretic action by continuous currents is so problematical that it would be fastidious to enumerate here the many opinions of those who have experimented with it—opinions which nearly all tend to the expression that this action does not exist and the analyses of the blood, of the salivary and the urinary secretions, are in evidence to prove that they are right.

On the other hand, in consequence of the frequent periods of these effluves and of the molecular bombardment which results therefrom, *ionization* is produced at the level of the effluved tissues, accompanied by chemical reactions, decompositions, and combinations which urological analysis reveals to us.

The effluves of high frequency have an intense and penetrating ionizing action. The alto-frequent effluviation causes medicaments to penetrate through the tissues by a *transport of ions* which result from the decomposition of these medicaments, by a series of electric phenomena which I would unite under the denomination of *alto-frequent effluvolysis*.

In order to arrive at a clear demonstration of my procedure, I will give you a few general notions upon the ionic theory. You are all aware that *Faraday* has established the fact that when a composite body is subjected to electrolysis its molecule is in some sort divided into two fragments which constitute the *ions*. Each of these ions possesses virtually a part of the electric energy which has produced the separation, but these electric energies are of contrary sign. This theory of *Faraday's* is quite inexact, and *Swante Strennhius* has established the general formula of ionization: *every time that we make a solution of a salt, of a base, or of an acid, a certain*

number of molecules of the dissolved element are divided into sub-molecules called ions. In these solutions the electric current does not pass except by means of this previous separation, *but it does not engender the ions, which pre-existed in the solution; it only distinguishes them, in one sense or another—negative or positive.* The positive ion is transported from the *anode* to the *cathode*; this is the *cathion*. The negative ion goes from the *cathode* towards the *anode*; this is the *anion*. Example: In a solution of chloride of silver, AgCl , the separation occurs in two ions, the ion *Ag* and the ion *Cl*. The ion *Ag* will go towards the *cathode*; this would be the *cathion*, *Ag*. The ion *Cl* goes towards the *anode*; this would be the *anion*, *Cl*. From the chemical point of view the ion is a simple atom or a group of atoms.

Thus, in the decomposition of chloride of silver, AgCl , the cathion, *Ag*, and the anion, *Cl*, are mono-atomic. In the decomposition of sulphate of copper, SO^4Cu , the anion which constitutes the group SO is bi-atomic, while the cathion, *Cu*, remains mono-atomic.

In the decomposition of complex solutions, such as a solution of chlorhydrate of morphine, $\text{C}^{17}\text{H}^{20}\text{AzO}^3\text{Cl}$, the cathion, $\text{C}^{17}\text{H}^{20}\text{AzO}^3$ is poly-atomic, while the anion, *Cl*, remains mono-atomic.

From the preceding, it results that the ions are, on the whole, the material realization of what is called *the remnants* in the atomic theory of chemistry, and that they cannot subsist in the ionic state except under electric conditions under which they take birth. There is no doubt that to these conditions we must attribute the more energetic affinities of the bodies in the nascent state. Unstable outside these conditions, the ions reconstitute the molecules of simple or composite bodies by uniting among themselves.

The organism of the individual, from the point of view of the organic liquids, is subjected to the influence of atmospheric voltaism of high frequency under which we live, to continual effluvolyses which decompose the molecules of the salts, bases or acids, and form these liquids into ions which are transported into the entire economy and ensure the vitality and the nutrition of the tissues. But if, for causes which are accidental or incidental—anæmia, diathesis, faulty elimination, hyper-secretion, etc.—these indispensable ionizations do not occur, or only occur in a defective manner in some or other of these organic liquids, the functions, the nutritions—in a word, the services depending upon the liquid—will suffer by it and waste away. It is to a processus of this character that alveolar pyorrhœa is due, and it is to a corrective, re-establishing processus that this ionization of chlorides of soda, urate of ammonia and of lime, hemoglobin, etc., is due—a processus, moreover, which causes the necessary medica-

ments to penetrate into the mass of the diseased tissues for their amelioration or for their cure; it is a corrective processus, I repeat, which alto-frequent effluvation constitutes, and I shall have recourse to this for the local treatment of alveolar pyorrhœa.

The effluves of high frequency render the mucous membranes porous, and this in itself favors medicamentous penetration. They produce profound modifications upon the exosmosis and the endosmosis of the membranes of animal origin, and, consequently, upon our tissues. Applied to the level of pyorrhœic lesions, concurrently with appropriate medicamentous solutions, under effluvolitic influence, electro-chemical action is produced as the result of the transformation of the osseous and dental tissues. The chemical reactions which occur favor the ionic transport. My method consists of decomposing, by means of alto-frequent effluves, upon the surface of the arthro-dental apparatus a solution of bichromate of potassium, which gives up the basal portion of its composition to the diseased tissues, thanks to the penetration which has been rendered easy by the effluvation.

(To be continued)

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2 Gould Chairs	25.00

WE INVITE SPECIAL DEPOSIT ACCOUNTS.

A cash deposit of \$100.00 to apply to general merchandise entitles the sender to a discount of \$11.11.

A cash deposit of \$50.00 entitles the sender to a discount of \$2.50.

A cash deposit of \$25.00 entitles the sender to a discount of \$1.25.

Why not send us a deposit NOW.

FOR SALE

Dental Practice—Town of Barrie, Ont., Office of the late Dr. MacLaren, satisfactory terms for quick sale. Apply Claudius Ash, Sons & Co., Toronto, Ont.

Contents of Toronto City Dental Office—A bargain. Apply Ash & Sons.

Dental Practice—Niagara Peninsula. Apply Ash & Sons.

Ash's Dental Rubbers

Are the best in the world and are the standard by which all others are judged.

NOTE.—Our Rubbers weigh 16 ozs. to the pound, exclusive of linen backing and box.

FOR COATING

	Per lb.	5-lb. lots	10-lb. lots	20-lb. lots
New Pink, Medium.....	\$6.00	\$5.40	\$5.00	\$4.75
No. 1X Pink, Medium.....				
No. 1 Pink, Light.....				
Gum Pink, Medium.....				
Gum Pink, Light.....	5.00	4.50	4.25	4.00
No. 2 X Pink, Medium.....				
English Pink, Medium.....				
English Pink, Light.....				

FOR BASE

Improved Black.....	4.25	3.80
Combination.....		
White for Side Blocks, etc.....		
Child's "G".....		
A. E. Elastic, Dark Brown.....	3.75	3.35
W. Elastic, Dark Brown.....		
Whalebone No. 1, Dark Brown.....		
Whalebone No. 2, Light Brown.....		
Solid Base.....	3.50	3.15
Dark Red.....		
Flexible Base.....		
Dark Elastic.....		
Maroon.....	3.00	2.70
Red.....		
Orange.....		
Dark Brown.....		
Brown.....		
English Base.....		

SPECIAL—FOR TENDER GUMS, ETC.

	Degree Fahrenheit	Time	lb.
Soft Pink, for lining Palates.....	310	1 15	\$6.00
Soft Dark Red.....	310	1 15	4.25
Vela for Artificial Palates.....	270	6 0	6.00
Brown Weighted			4.25
Pink Weighted			6.00
Brown Repairing			4.75
Pink Repairing			6.00

NOTE.—Cash Discounts do not apply on quantity rates on our Coating Rubbers in any quantity over 5 lbs.

CLAUDIUS ASH, SONS & CO. LTD.

RADICIN

(Lepowski)

Has Cured Thousands
of cases of
PUTRESCENT PULP
Trouble in One Sitting

SEND A MAIL ORDER NOW

POWDER *AND* LIQUID - 1.50

Claudius Ash, Sons & Co., Limited
SOLE AGENTS

GALLOWAY'S SUCTION DEVICE

FOR LOWER DENTURES ONLY

Patented in United Kingdom and U.S.

Other Patents Pending.

This Suction is the most satisfactory ever offered. It consists of a curved metal bar, which has counter sunk holes in it for four pins to secure it to a plaster model, and a vulcanized strip of Ash's specially prepared Vela Rubber which so well withstands the oral fluids.

This Rubber Strip is held in position in the denture by the suction which is produced by the small holes on the curved surface and to the gum by the suction through the larger holes on the flat surface. The Strip can be removed and cleansed, and replaced in half a minute.

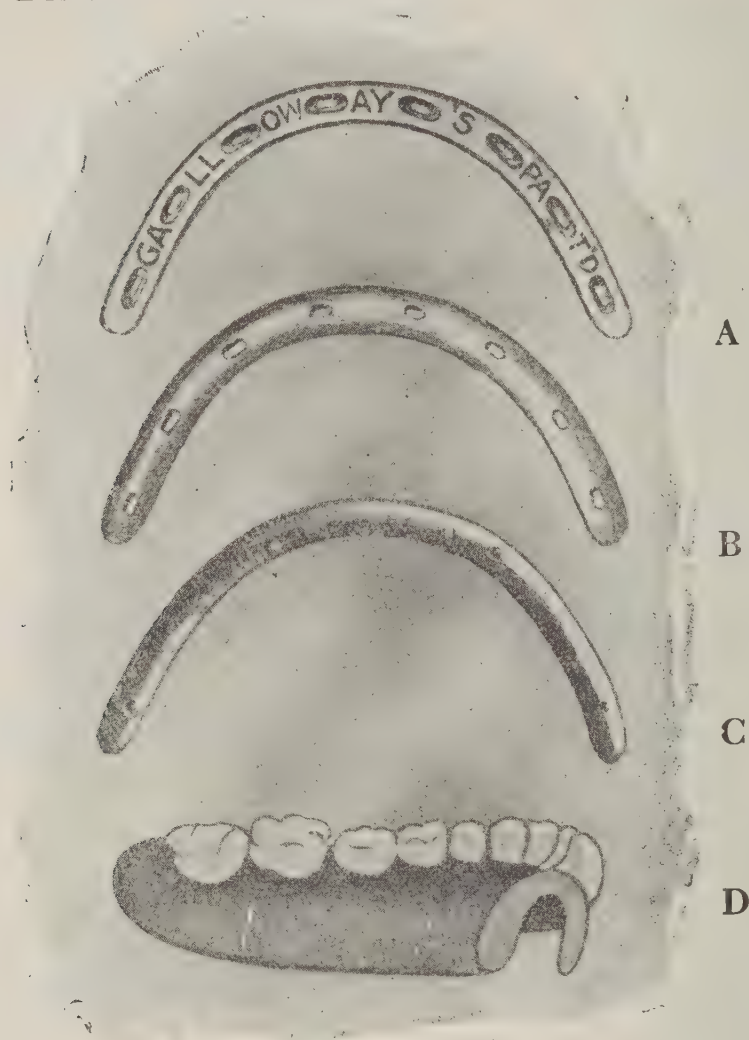
The device is cleanly and secures the denture properly without any discomfort to the patient.

PRICE \$1.00

Sole Agents—

Claudius Ash, Sons & Co., Limited

GALLOWAY'S SUCTION DEVICE FOR LOWER DENTURES ONLY—continued.



Natural size.

A and **B** show the flat and rounded surfaces of the rubber strip and the holes which serve to retain the denture in position in the mouth.

C—Metal bar with countersunk holes into which the heads of the pins should be firmly pressed.

D—Vulcanite blank which shows the rubber strip in position.

Price.....\$1.00 each

SOLE AGENTS.

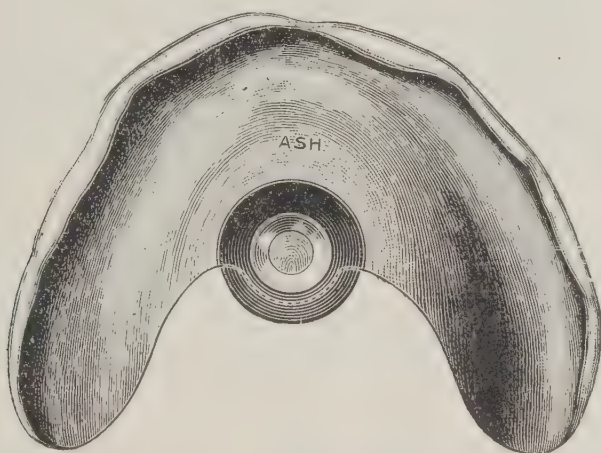
Claudius Ash, Sons & Co., Limited

Rauhe's Improved Suction Disc for Vulcanite Dentures

PATENTED IN ENGLAND, GERMANY, FRANCE, AUSTRIA-HUNGARY,
BELGIUM, THE UNITED STATES, ETC.

Rauhe's Suction Disc has been specially designed to prevent injury to the palate. It does not draw down the tissues and produce soreness in the mouth. In this respect it is greatly superior to all existing Suction Discs.

There are no parts about it which can be lost or misplaced, such as bolts, or screws, etc.



It is easily kept clean, owing to the fact that the rubber disc can be removed and replaced in a few seconds, without the use of a tool of any kind.

The anchorage of the rubber disc is so simple that the patient can renew the disc when necessary.

The suction power of the disc is sufficient to hold a denture quite firmly and securely in position.

It is unnecessary to add clasps to partial sets which are fitted with Rauhe's Suction Disc.

DIRECTIONS FOR USE:

Press the disc on the most suitable part of the plaster of Paris model with the thumb, fasten it in position with the three small pins which are supplied with it, being careful to drive the heads right home, and pack the hole in the centre with dental rubber. After the case is packed and vulcanized, strip off the tin form in which the stud is embedded; the portion in which the pins are

ASH'S CANADIAN MONTHLY CIRCULAR

driven should be removed first. To facilitate removal, cut through the tin, open it with a pocket knife or suitable tool, and strip it off. Should the edge of the stud be bent in stripping off the tin form, it can readily be straightened with any blunt tool. When the stud is thus cleared of the tin form, slip a rubber disc over it and the Suction Disc is ready for use. To do this, the rubber disc should be held down with the thumb of the left hand and stretched over the stud with the thumb and forefinger of the right hand.

In regard to the position in which the Suction Disc should be set on the plaster of Paris model, it will be obvious that the flattest part of the palate should be chosen. Two Suction Discs should be used on exceptionally high palates and on V-shaped palates—one on each side. In the case of large palates it is desirable to set the Suction Disc as far back as possible.

Sometimes the full power of the Suction Disc is not immediately exercised when it is first put into the mouth, but after it has been worn for some time its action will be perfectly efficient.

SPECIAL.—To remove the collar from beneath the Stud, after the case is vulcanized, insert the point of an excavator in the slit exactly opposite the letter C in the name C. Rauhe and open it out gradually, without levering it up, so as not to injure the stud.

PRICES.

Rauhe's Suction Discs for Vulcanite Work:

Gold Stud with 3 India-Rubber Discs.....	each	\$ 1.00
	per doz.	11.25
Aluminum-Alloy Stud with 3 India-Rubber Discs, each		.50
	per half doz.	2.50
Extra India-Rubber Discs, any size.....	per doz.	.30

Claudius Ash, Sons & Co. Limited
SOLE AGENTS.

MOUTH MIRRORS



Since advertising our CONE SOCKET MIRRORS at 25 cents each in previous issues, we have sold many hundreds of them.

We want to attract your attention also to our

METAL HANDLE MIRRORS

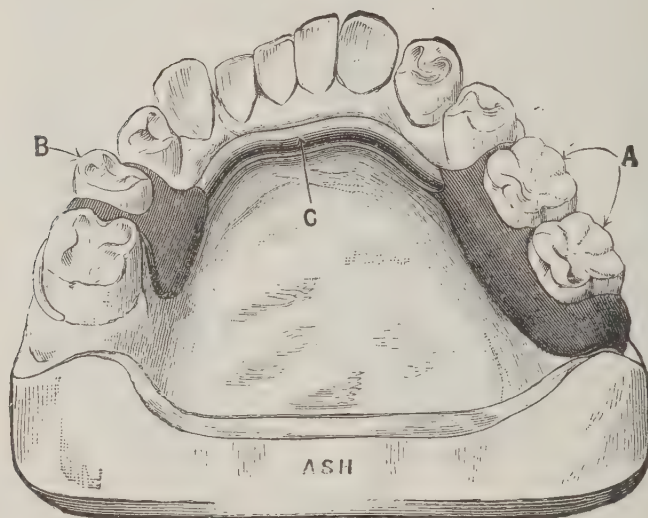
30 CENTS EACH

We have a fine stock of these and can supply them either
PLAIN or MAGNIFYING in the various sizes.

A request postal will promptly bring one to you.

Claudius Ash, Sons & Co. Limited

Ash's Oval Gold Cased Wire FOR BAR LOWERS



Bar Lower Dentures have come into universal demand. Note some of their advantages.

No tendency to push teeth outwards.

Greater cleanliness.

Less bulk.

Greater rigidity.

Per dwt. \$.40

Claudius Ash, Sons & Co., Limited

The Solbrig-Platschik Press



This cut represents **THREE** aluminum Dentures, cast by Ash & Sons on this machine. It will be noticed that these three dentures are cast through **ONE** sprue.

This machine is adapted for use for all sizes of work. The quality of metal it turns out has never been equalled in casting.

Price, Complete with Furnace and Blow pipe \$60.00

Ask for Catalogue J.

Claudius Ash, Sons & Co. Limited

If You Want To Insure Success

In the Casting of Gold Inlays and Gold and Aluminum
Dentures use

SOLBRIG'S EMBEDDING MATERIAL

The great amount of research work done by M. O. SOLBRIG, L.D.S., of Paris, has, among other valuable results, given us the ideal in Investments. In the Embedding of large cases the most frequent cause of failure is through inability to properly surround the model, feeling certain that no air bubbles exist. Solbrig Embedding Material is mixed and poured like cream, giving absolute certainty of perfectly surrounding the model. The total absence of shrinking and cracking will delight you. It is a very open, porous material, and allows a free escape of air from the mould.

Tin containing 7 lbs.	-	-	-	\$1.25
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Tin containing 28 lbs.	-	-	-	\$3.50
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Claudius Ash, Sons & Co. Limited

Aluminum for Casting

If you want the Best Aluminum Specify

“ASH’S”

If you have not already used Ash's 99 per cent. Aluminum or Ash's Aluminum Alloy, send in a Mail Order now.

We have many unsolicited testimonials from one end of Canada to the other.

One of our customers writes:—"Send me 20 packets Ash's Aluminum Alloy for casting metal plates. **I find this good.**"

PRICES

Aluminum Ingots.....per lb. \$1.50

Aluminum Ingots.....per half lb. 0.75

Aluminum Alloy.....per pkg.. 0.65

Claudius Ash, Sons & Co. Limited



Makes the impractical in castings easy and accurate.



These two patterns are en-meshed directly in the mouth, readjusted as many times as desired and removed from the root without distortion.

FEATURES.

Correct Root Base—Coping with or without Band—Pure Gold Casting with Alloyed Edge—Uniform Results.

Instructive literature for many other uses upon request.

Price, \$1.15 sq. in., Canada.

Sizes, 5 sq. in., $2\frac{1}{2}$ sq. in.

Tatham Gold Mesh Company

90 Griswold St., Detroit, Mich., U.S.A.

SOLE AGENTS FOR CANADA:

CLAUDIUS ASH, SONS & CO., LTD.

WHAT YOU HAVE SO OFTEN ASKED FOR

A POPULAR TEMPORARY STOPPING AT
30 CENTS A BOX

It's a good guttapercha, scientifically prepared,
and it will please you as it has
satisfied many others

WE MAKE A QUANTITY RATE OF 6 BOXES
FOR \$1.50

SEND US AN ORDER NOW

ASH'S POPULAR STOPPING

CAST ALUMINUM PLATES

BY PLATSCHICK STEAM SYSTEM
FIT AND QUALITY GUARANTEED

ALL CLASSES OF MECHANICAL WORK

FOR THE DENTAL PROFESSION

SEND FOR PRICE LIST

THE MONARCH DENTAL LABORATORY

467 PARLIAMENT ST., TORONTO

TELEPHONES MAIN 364

AFTER HOURS N 4284

Fellowship Alloy

The original Tested Alloy, and for the past 15 years the standard of the world



Great Edge Strength. No Contraction 120000 of an inch Expansion.

Learn to say Fellowship

SOLD BY

ALL DENTAL DEPOTS

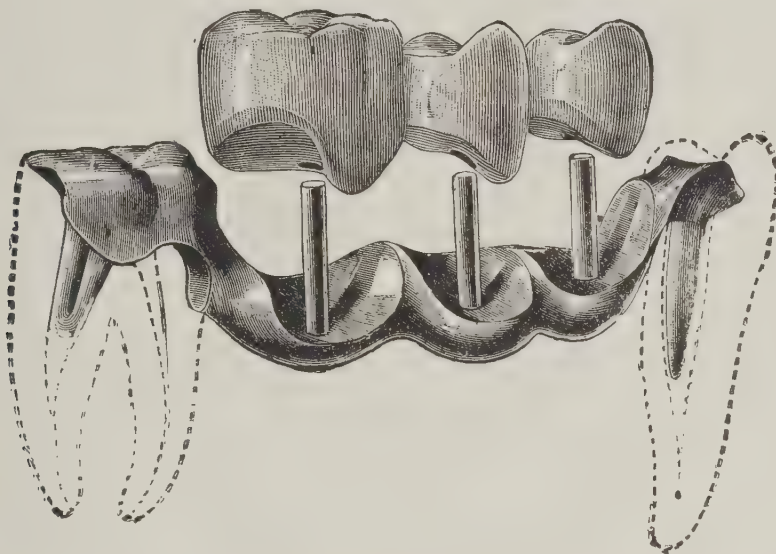
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**DENTAL PROTECTIVE SUPPLY CO.,
Chicago, Ill.**

C. L. DALY

The leading Specialist in Dental Mechanics to the Profession.

A strong and simple tooth for Bridge Work (replaceable) is the Non Platinum Tube Tooth.



Case like the above can be made up either with Tube Teeth or Dowel Crowns \$3.00 per tooth, teeth extra.

Partial Price List for General Work.

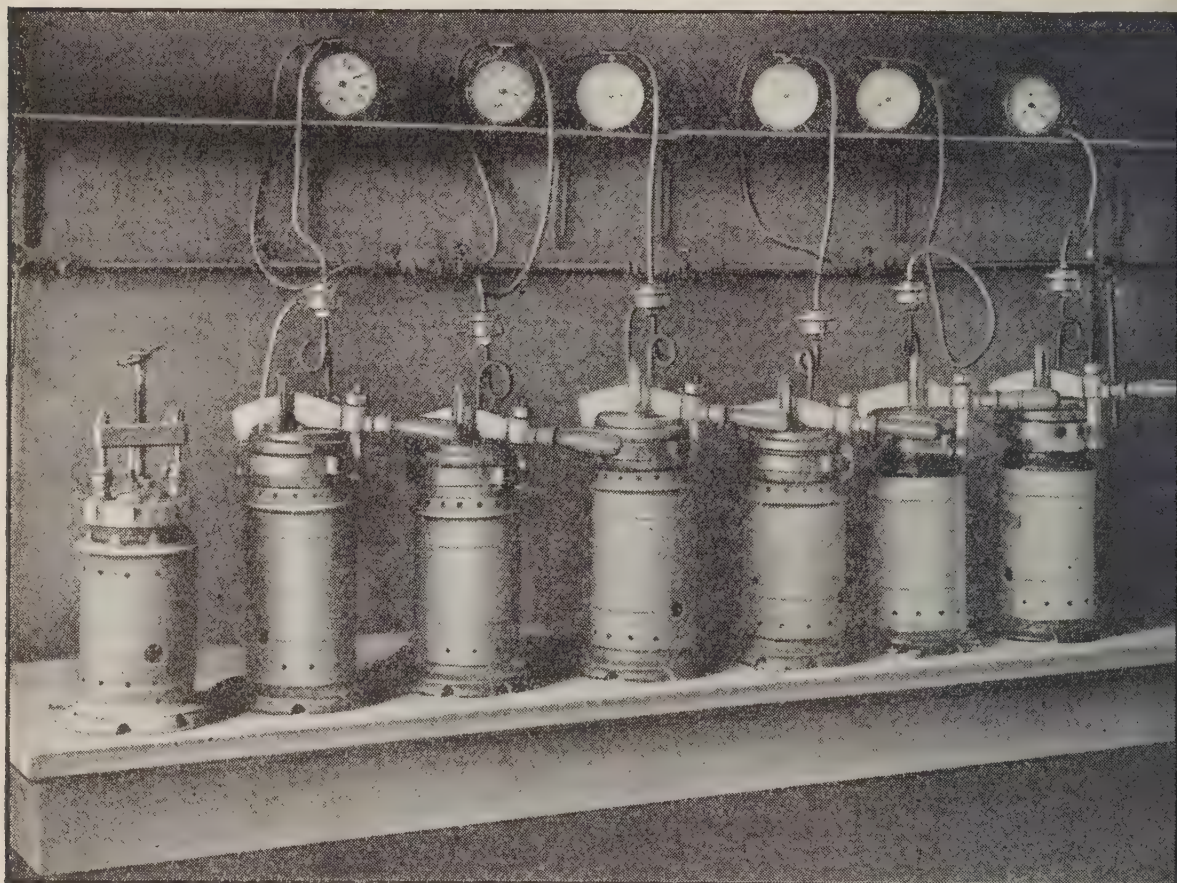
Gold Crowns—Cen, Lat. Cus. and Bic.....	\$2.00
Molars.....	\$2.25 to \$2.50
Bridgework—Ant. Dummies...	\$2.00
Ant. Richmonds (when base is supplied by you).....	\$2.25
Bicuspid Dummies.....	\$2.50
Molar.....	\$3.00 to \$3.50
Facings charged extra at market price.	
Gold Inlays— (Send wax impression packed in tissue paper.)	
Casting only.....	\$0.75
Gold.....	\$.05 per gr.

Rubber Dentures—	
Plate Work.....	\$2.50 to \$3.00
(Partials, \$2.00)	
Swaging metal plates (swag- ing only) Aluminum	\$3.00
“ Gold.....	\$3.50 to \$4.00
Casting metal plates (cast only).....	\$4.00
Finishing with vulcanite....	\$2.50
All teeth charged extra at market price.	
Send impressions (unpoured) plaster preferred, for all classes of work including metal work.	

SEND A TRIAL ORDER. SATISFACTION GUARANTEED.

When you write, give full particulars of case and when wanted.
You will not be disappointed.

CHARLES L. DALY
11 GRENVILLE STREET, TORONTO.



Ten Plates the Daily Average

This battery of Lewis Vulcanizers, with an Edison at the extreme left of the picture, does all the vulcanizing in a busy Western Laboratory, employing eight rubber workers.

The average daily output per Vulcanizer is ten plates, and multiplied by the 300 working days of the year, this laboratory's product of one year represents more cases than the average dentist handles in a life-time of laboratory work.

The conclusion? The Lewis and Edison Vulcanizers stand the continuous and severe usage of a modern and extensive laboratory; why are they not best also for your use?

Two books we want you to have: "VULCANIZERS AND VULCANIZING" containing ten pages of things you will be glad to know, with reference to the care of vulcanizers, and kinks in vulcanizing;—also catalog "C" of Vulcanizers and appurtenances.

YOUR ADDRESS, PLEASE.

PRICES:—Lewis Vulcanizers, \$20.00; \$22.50; \$25.00. Edison, \$37.50.

BUFFALO DENTAL MANUFACTURING CO.
Buffalo, N.Y., U.S.A.,

“A Rift in the Clouds!”

exclaimed one of the most prominent
prosthetic authorities, when he saw the

JUSTI TRUE TO NATURE TEETH

The great problem of prosthetic dentistry has been the proper articulation of artificial dentures, particularly the bicuspid and molars.

The “True to Nature Bicuspid and Molars” have solved the problem, as the interlocking of the uppers and lowers is perfect, each tooth fitting in its respective place, while the large occlusal surfaces insure proper mastication.

These teeth are constructed in such a way that, when the jaw assumes the lateral position, there will be contact from the central back to the molars on one side and bicuspid and molars on the other, or vice versa; during the incising motion of the jaw, each tooth slides down the occlusal plane to its respective position.

Owing to the characteristic form of these teeth, time can be saved in mounting them.

Most of our large variety of front molds can be used with the “True to Nature Bicuspid and Molars;” this, together with the unsurpassed Justi Porcelain and Shades, gives the Dental profession a line of artificial teeth which is close to perfection.

These Bicuspid and Molars can be furnished in platinum pin or diatoric teeth.

Call for **“Justi’s True to Nature Teeth.”**

H. D. JUSTI & SON

Philadelphia, Pa.

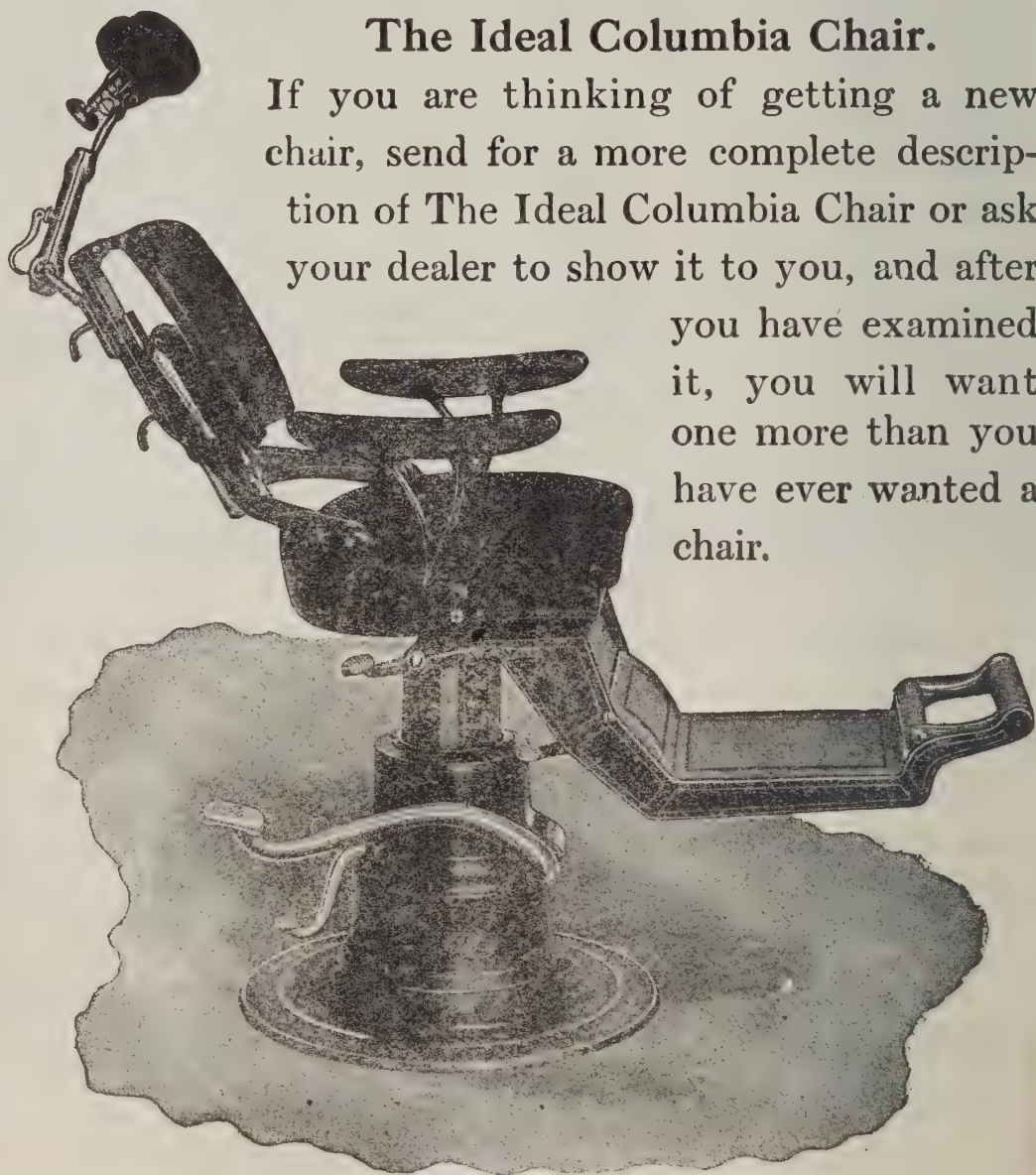
Chicago, Ill.

The Ideal Columbia Chair

is the only type of Columbia Chair now made, as we have discontinued making *all* former models and combined the best features of our previous styles, with additional improvements, in this—

The Ideal Columbia Chair.

If you are thinking of getting a new chair, send for a more complete description of The Ideal Columbia Chair or ask your dealer to show it to you, and after you have examined it, you will want one more than you have ever wanted a chair.



IN STANDARD FINISH, \$230.00.

THE RITTER DENTAL MFG. CO., Rochester, N.Y.

T. N. CLARK, 167 KING ST. WEST, TORONTO,
WHOLESALE DISTRIBUTER.

GOLD SOLDERS

**ASK THE DENTIST OR
MECHANIC
WHO IS USING OUR
SOLDERS**

**THE BEST AND CLEANEST
FLOWING TO BE HAD
PRICES RIGHT
SPECIAL QUANTITY RATES**

No. 22 Solder	No. 16 Solder
No. 20 Solder	No. 14 Solder
No. 18 Solder	Coin Solder
Silver Solder	

All to be had also in wire form.

INLAY GOLD

24 Kt. in 2 Dwt. Buttons
24 Kt. with 5% Platinum

FILLING GOLD

Foil No. 4, 5, 6, 30 and 60
Cylinders No. 1-4, 1-2, 5-8, 3-4,
1, 1-2 and Ass't
in 1-32, 1-16, 1-10 and 1-8 Vials

Special rates in oz. lots

GOLD PLATE

24 Kt.
22 Kt. Soft, Medium or Hard
20 Kt. Plate or Wire
18 Kt. Plate or Wire

CLASP PLATE OR WIRE

22 Kt. Special for Backing
18 Kt. Special for Backing

COIN GOLD PLATE

22 Kt. Shells or Disks

PLATINUM

Foil, Extra Soft, 1-1000, 1-2000
Wire, 3% to 30% Iridium

SCRAPS AND FILINGS

**BOUGHT FOR
CASH OR IN EXCHANGE**

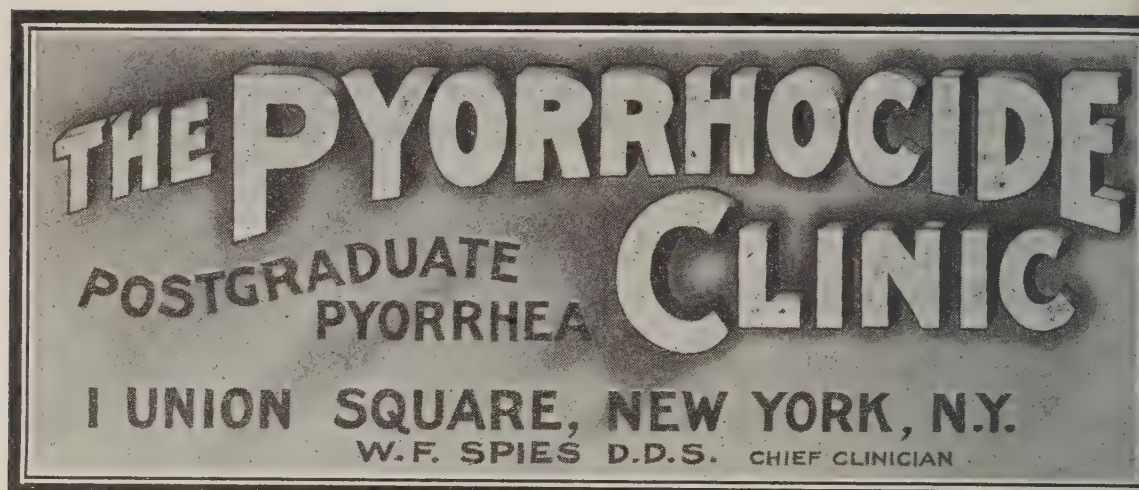
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JULIUS ADERER

MANUFACTURER

101 WEST 42nd STREET - - NEW YORK

Branches: Brooklyn, N.Y.; Seattle, Wash.



YOUR VACATION can profitably be extended to include a few days at our Pyorrhocide Postgraduate Pyorrhœa Clinic. The experience gained will prove of permanent professional and financial value to you.

Let us demonstrate what can be accomplished **in saving teeth** and in **effecting mouth health**.

Let us teach you the methods which have proved most **successful** and give you practical experience in treating cases.

This Clinic is conducted for your benefit; demonstrations and instructions as well as instruments and materials necessary for your use at the Clinic are furnished without cost to you.

It will pay you to visit us; we will be adequately repaid with your greater appreciation of our work.

The Pyorrhocide Clinic

1 Union Square,

New York City, U.S.A.

N.B.—Write for our illustrated book “Pyorrhœa, Its Causes, Effects and Treatment,” mailed free on request.

Dentists—Do you know—

that you advertise your office as Sanitary and modern by using our Sanitary Reversible Covers on your Dental Chair; by using them you secure the good-will and gratitude of your patients, you protect your chair and “tone up” your office.

Made in any pattern to harmonize with the finish of your office.

A single trial will make you a constant user.

Samples mailed free on request.



Sold through Claudius Ash, Sons & Co., Ltd.
11-13 Grenville St., Toronto, Can.

The Sanitary Cover Co.
Cleveland, Ohio.

DUPLEX packs into a cavity under hand pressure like wax.

It is as cohesive as gold and is a better material because tin is a germicidal mineral that prevents extension of decay.

Gold adheres to it as readily as to a gold base; hence to all outward appearances it is a gold filling.

Yet while you get as much and should get more for it than gold, it costs you just half as much.

Per package, \$2.00.

MEIER DENTAL MANUFG. CO.

LICENSEES

ST. LOUIS, MO

LEE S. SMITH & SON CO.

DISTRIBUTERS

PITTSBURGH, U. S. A.

Clark New Model Gas Apparatus

Prepare Cavities Without Pain.

One Handle to Operate—The Office Assistant Does It.



The apparatus you have been waiting for. Send for it now.

You can do better dentistry, more dentistry and give better satisfaction.

We are the oldest and largest makers of nitrous oxide and oxygen gas apparatus.

Write us for our new catalog fully describing and illustrating our New Model fountain spittoons, and New Model Gas Apparatus. It is just off the press.

A. C. CLARK & CO.

Grand Crossing

Chicago

Orders or inquiries from Great Britain and its Colonies (except Canada) from Continental Europe and Africa should be sent to

De TREY & CO., LIMITED

13-14 Denman Street, Picadilly Circus, London, Eng.

Goslee Teeth

For Crown and Bridgework

A Complete Assortment of
Handsome Anterior Molds
 Is Now Ready

They are beautiful in "THAT LIVE TOOTH APPEARANCE."

SEND FOR BOOKLET B,
 in which all the Goslee Molds are illustrated.

SEND FOR BOOKLET C,
 By HART J. GOSLEE.

DR. HART J. GOSLEE has consented to write "The Technique for Using the Goslee Interchangeable Tooth for Single Crowns and All Forms of Bridgework," as well as Vulcanite Work. This booklet is an illustrated text book and describes every step to assist the novice in making the handsome crown and bridgework, which only the Goslee Teeth can produce.

SEND FOR CHART OF GOSLEE TOOTH MOLDS

THIS is an accurate photographic chart, showing all the Goslee Molds, actual size. It is substantial and is fitted with rings for hanging on your laboratory wall. It will enable you to select the molds you require for your cases and thus save you time, trouble and expense.

Any or all of the above will be sent postpaid.

CONSOLIDATED  DENTAL MFG. CO.

130 Washington Place, New York.

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New York	45 West 34th Street	Cleveland	496 Colonial Arcade
Chicago	132 No. Wabash Ave.	Boston	120 Boylston Street

The J. M. NEY COMPANY, makers of NEY'S DENTAL GOLDS
are now issuing, FREE, a veritable

BUDGET OF GOLD KNACKS FOR THE GOLD WORKER

—a very comprehensive, useful little book of things that you once learned and have forgotten; the little knacks taught only by experience and never included in a text-book; an indexed reminder of "just how you did it before;" **not** a treatise on the easy, obvious things in gold manipulation, but an orderly reminder of the way through the mean little jobs that you run up against.

Here is a word (verbatim) to show that the little book is appreciated.

J. M. NEY CO.,
Hartford, Conn.
Dear Sirs;—

I received your booklet "Ney's Golds" and I want to tell you that it is an elegant advertisement. I learned from it some points about soldering that I ought to have known; and something about annealing both plate and filling gold.

I had a central porcelain facing to tip yesterday and I tried your "Safe Method" and I find that it is an improvement on the method I was using.

So, I was so pleased with the information you so kindly sent me, that I immediately sent in an order for an ounce of solder to Kansas City.

Yours truly,

W. H. Conner.

Send for "Ney's Gold Book."

THE J. M. NEY COMPANY
HARTFORD, CONN., U. S. A.

HAVE YOU EVER

examined the quality of cast inlays, bridges, or cast Aluminum dentures when made by any other method than superheated steam?

We would like the opportunity to demonstrate this important point to you.

The Solbrig-Platschick Press

Gives you cast gold and Aluminum of the textures of the beaten metal. No Brittleness. No pitting of Aluminum.

Write us for information; it will cheerfully be given.

Claudius Ash, Sons & Co., Limited

ASH'S Canadian Monthly Circular

Issued from Toronto on the First of each Month

VOL. II

JULY, 1912

No. 10

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Treatment and Cure of Alveolo-Dental Pyorrhea

(Continued)

Second-Hand Goods

Advertising Section

New Goods and Novelties

CLAUDIUS ASH, SONS & CO., Limited

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BERLIN, Jagerstrasse, 9
HAMBURG, Gansemarkt, 62 and 63
FRANKFURT, a/m Borsenplatz
MILAN, 11 Via Monte Napoleon
AMSTERDAM, 149 Weteringschans
VIENNA, Spiegelgasse, 2

BUDAPEST, Ferenczike, 4
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COPENHAGEN, Boldhusgade, 3
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STOCKHOLM, Malmskilnadsgatan, 44
ST. PETERSBURG, 21 Gogolstr
MOSCOW, Kusnetski Pereulok, 3
NEW YORK, 30 East Fourteenth Street
TORONTO, 11 and 13 Grenville Street
ALEXANDRIA, Trieste St. No. 1
CAIRO, 4 Taher Street, Opera Square

BRESLAU, Gurtenstrasse, 22

We have just received a complete stock of Goslee Interchangeable Teeth.
Molars and Bicuspid only.

SEND YOUR MAIL ORDER NOW.

RADICIN

(Lepowski)

Has Cured Thousands
of Cases of
PUTRESCENT PULP
Trouble in One Sitting

SEND A MAIL ORDER NOW

PASTE and LIQUID - - \$1.50

Claudius Ash, Sons & Co., Limited
SOLE AGENTS

Ask about Bleaching with Radicin

Ash's Canadian Monthly Circular

Vol. II.

TORONTO. JULY 1, 1912

No. 10

TREATMENT AND CURE OF ALVEOLO-DENTAL PYORRHOEA BY MEANS OF ALTO-FREQUENT EFFLUVATION.

By F. MOREL, Surgeon-Dentist of the Faculty of Paris: Surgeon-Dentist to the Civil Hospital of Dreux.

(Concluded from page)

After having removed from the affected teeth all the visible or accessible tartar, but only this, I carefully wash the gums and the necks of the teeth, as well as all the denuded spaces, with oxygenated water of twelve volumes strength, in order to ensure the evacuation of all the pus.

I then paint the teeth and the gums, and, by means of an agate spatula. I cause the following solution to penetrate below the necks of the teeth:—

Fluosilicate of soda.....	2	grammes
Chloride of ammonia.....	1	gramme
Chloride of potassium.....	1½	grammes
Salicylate of theobromine....	1	gramme
Methylal.....	50	centigrammes
Distilled water.....	20	grammes. Filter.

This solution favours the ionization by diminishing the resistance of the tissues to the penetration of the effluves and by increasing their tendency to porosity. These phenomena are due to the effluviation itself, as well as to the vasomotric action of the methylal and of the salicylate of theobromine.

Having accomplished this, I place upon the gum, at the level of the diseased teeth, a pad of cotton-wool strongly saturated with the following solution:—

Bichromate of potash.....	10	grammes
Distilled water.....	100	grammes

This band of cotton-wool extends to about four teeth—I do not treat more than four teeth at a time—and it is upon this cotton-wool, at the level of the necks of the affected teeth, that I rest rather forcibly the empty electrode which brings to the diseased region the alto-frequent rain of effluves. We must not be rough in this movement of pressure, because the electrode is fragile; yet it is necessary that contact be as intimate as possible, in order that the sensation may be neither painful nor disagreeable.

When I deal with advanced pyorrhœa, by means of a metallic electrode I project about ten sparks into the infected pockets; this conflagration, which is not very painful, acts as a destructor of the infected cells—as a microbicide. The lymphorrhœic exudation which follows it forms, as it were, a rinsing from within outwards which expels the calculous debris and eliminates the morbid elements, diseased or infected. I repeat these operations of effluviation every two days, each operation lasting fifteen minutes, which I divide into three periods of five minutes. In general, at the end of six operations, at the maximum, the cure is complete.

During the entire period of the treatment I order rinsings and baths of the mouth to be carried out with the following solution:—

Salicylate of soda.....	10 grammes
Fluosilicate of soda.....	2 grammes
Distilled water.....	1 litre

to the number of six per day, with half a glass of the solution each time.

I will not describe anew the apparatus employed for producing the effluviation: for the continuous current it is composed of a Rhumkorff coil of 25-cm. sparks with rotary interrupter, with a jet of mercury, an exploder, a condenser, and Dr. Gauthier's unipolar transformer.

For the alternating current we employ Gauthier's apparatus in which the coil and its interrupter are replaced by a transformer with closed magnetic circuit.

Let me recall to you that during the passage of the current in these different systems there is already ionization of the ambient air; the azote ions are deposited in the form of azotic acid in the exploder, while at the electrode ozone, or condensed oxygen, is produced.

Care must be taken to regulate the rotary interrupter and the exploder in such a manner that the constancy of the oscilla-

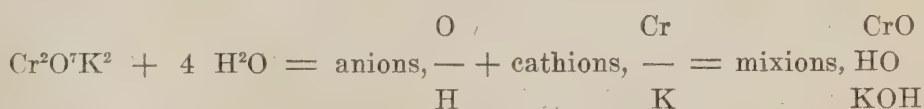
tory spark is maintained as perfect as possible, because irregular disruptions produce painful shocks to the patient.

Finally, I would recommend the isolation of metal fillings by means of gutta-percha, because the effluvation causes rather intense pain in teeth in which there are such fillings.

We are now about to study what happens at the moment of the bursting out of the effluves. This effluvolysis does not, like electrolysis, have for its result a simple transport of the ions which travel respectively towards the positive or the negative pole, but there is produced, in consequence of the frequent periods, molecular vibrations to which these periods give rise—vibrations which constitute a veritable ionic bombardment. It is no longer a question merely of cations or anions; all these ions clash together, mix, unite, and combine to form new molecules of a different chemical formula from the primitive elements. The exchange of the ions is cathodic and anodic at the same time at the point of application of the effluves; I will call the molecules thus newly formed mixions. I have brought into evidence on many occasions this special ionization by means of alto-frequent effluves in the experiments which I have made upon guinea pigs, into the organism of which I have caused to penetrate, by means of effluvolytic ionizations, cyanide of potassium or oxalate of strychnine, which produced convulsions in a few hours, rapidly followed by death.

In effect, the medicaments thus decomposed in mixions are put into immediate contact with the cells of the diseased tissues, and this will increase by itself the porosity of the tissues much more readily than the effluvation. In addition to the effluvolytic phenomena, osmotic actions are also exercised.

Before proceeding further in this demonstration, what are the chemical reactions which have had their birth in consequence of the effluvolysis of the bichromatised solution which I employ? I will give you the formula thus:



Bichromate of potash plus water

which enables me thus to designate the atomic reactions produced under the influence of the effluvolytic ionization:—



Bichromate of potash + water = chromic acid + caustic potash + water.

I have no need to tell you of what value chromic acid (CrO^3) is to us in the treatment of pyorrhœa. The acid acts as a des-

troyer of the infectious germs and as a stimulant of the enfeebled peripheric circulation, and the caustic potash (KOH), by reason of its lithontriptic power, makes a dissolvant that is in every way indicated for tartar.

These chemical compositions thus placed in immediate contact with the diseased tissues and the purulent pockets will act the more efficaciously the longer they are in contact with them. I will say, in regard to this subject, that medicaments introduced into the organism by alto-frequent effluvolysis are absorbed and eliminated much more slowly than those introduced through the digestive process or by the hypodermic method. Urologic analysis does not reveal to us the presence of the medicament until twelve hours after effluvation, and it does not become eliminated before the end of two days; while by the hypodermic method it appears in the urine within one hour of injection, and is eliminated in two hours.

It is thus evident that in this medicamentous penetration we cannot question the value of effluvolytic intervention. Do not tell me that we have here a processus which is purely physical. Why do not the medicamentous solutions applied alone, without effluvation, penetrate into the economy through the skin and the mucous membranes? Is there simply, in this penetration, an absorption due to the fact that the tissues have been rendered permeable by the current? I do not believe so; for this porosity is clearly insufficient, and it is necessary that there is ionizatrical action to cause this effect. Contrary to cataphoresis, in which the absorption of the medicaments is accomplished rather by osmotic phenomena than by electro-chemical passage, the effluves of high frequency cause a veritable progress of decomposable medicamentous agents, and of this I can see proof in the analysis of urines, which reveals the presence of one or several component elements of the ionized product.

What is the number of ions, cathions, anions, or mixions which I thus introduce into the organism? I cannot yet say, and the formulæ of Van t'Hoff and Swante Strennhius do not enable me at present to calculate them; but, as I have at the same time to take account, in the transport of the mixions, of the respective swiftness and density of the anions and of the cathions which compose them, it is necessary for me to be able to establish the contribution of each of these ions in this transport, and it is only after having done this that I shall be able to elaborate a definite formula. I am pursuing the mathematical realization of this formula, because it would permit me to guide in a much more perfect fashion the action of the effluvolized

medicament; the work and the experiments to which I have attached myself make me hope that in a few months' time I shall be clear, and I hope that at the Congress of Rouen I shall be able to present to you a definite and solidly supported theory of the ionization produced by alto-frequent effluviation.

But the role played by effluviation in alveolar pyorrhœa does not limit itself to ionization. Tripet, Guillaume, Weil, Litez, and d'Arsonval have proved by striking experiments upon patients affected with chronic rheumatism that the effluves of high frequency produce a super-activity in the reduction of the oxy-hemoglobin. The increase of this reduction is accompanied by a super-formation of hemoglobin, and these two variations of quantity and activity in the reduction cause in the chloro-anæmic and the arthritic a hematic reaction which becomes translated by an appreciable symptomatic amelioration. The urologic analysis and hematic examination made after an alto-frequent effluviation emphasize a very abundant elimination of urea, urates, oxalates, sulphates, etc., and you may judge from now what preponderating action these effluve baths have against the formation of precipitates and organic calculi.

Further, these effluves constitute a modifying agent of the highest intensity. Acting upon a mucous membrane, they stimulate the vital functions, and produce a super-activity of the cell and protoplasm.

I have already explained to you the important production of ozone resulting from the bursting forth of the effluves and the spark of high frequency. By effluviation we produce at the contact of the diseased tissues an atmosphere of nascent oxygen, the antiseptic role of which is so important that endeavors have been made to create it by means of products which only imperfectly fulfil the object to be obtained. They are oxygenated water, perborate of soda, and oxygen in a gaseous state. It is likewise the nascent oxygen which acts in the employment of certain antiseptics, such as permanganate of potash, iodoform, etc.

This aseptic action of the alto-frequent effluviation is incontestably established by the experiments of d'Arsonval, Charrin, and Fouveau de Courmelles upon bacilli and pyocyanic toxines; also by my personal experiments in animavili upon the tetragenous microbe, its hybrids and their toxines—experiments which I presented to you at the Congress of Poitiers. By means of effluviation we profoundly modify the pathogenic bacterian toxines and we render them inoffensive; we annihilate every pathogenic microbe by ionizing its fatty protoplasm; we transform

the diseased cells by ionic transport, thus realizing an effective antiseptia which is absolute because it is reasoned and natural. It is in consequence of these transports of oxygenous ions in the infectious pockets upon the diseased tissues, as well as of the chemical inter-effluviary decompositions and combinations which have their being through this transport, that this antiseptia is obtained.

By annulling in the majority of cases, by attenuating in certain others, the virulence of the microbial toxines, effluviation gives to the leucocytes a more intense combativeness: the diapedesis and the phagocytosis become more effective, the inert conjunctive cells are excited towards proliferation, the sanguineous and lymphatic stasis diminish, the pyorrhœic or purulent exudations are eliminated by the lymphatics, and the diseased region is purified; all these ameliorations cause the pyorrhœic condition to retrocede rapidly, and all this is the work of alto-frequent effluviation.

And there must certainly be produced in the presence of these effluves a number of other actions, superposed to these actions of a chemical character, upon the phosphates, the urates, the salts, and the organic centres: actions of a physiological order upon the same centres or upon the cellular elements; actions of an electrolytical kind, profound and widely diffused; actions, finally, which by their juxtaposition contribute powerfully to the resolution of the buccal phlogoses and suppurations.

To summarize, there is the anti-calculous action due to the microbicidal and dissolving power of the effluves, and consequently a notable diminution of the salivary precipitates, proliferation of the leucocytes, destruction by phagocytosis and the plasmic ozonization of the noxious substances, destruction of the bacilli and attenuation of their toxines, destruction and elimination of the diseased cells by the conflagration; and in consequence of all these phenomena, purification of the diseased regions, regeneration of the tissues by the fixation of young cells—such are the processes of defence called into play by alto-frequent effluviation.

I venture to say that I do not exaggerate in declaring that alto-frequent conflagration and effluviation are excellent therapeutic agents against pyorrhœic lesions, and in general in hyperæmia, in congestion and infection of the gum and of the periodontium. I am justified by reason of the results obtained by this method—which I will demonstrate before you upon two patients—in saying that treatment by medicamentous agents alone, such as chromic acid, lactic acid, lactic ferment, lacto-bacilline.

fluoram, and Nord'hausen's sulphuric acid, have only a superficial and fleeting action. With these methods the removal of the tartar beforehand ought to be as complete as possible; and you know, like myself, how very delicate this operation is, and how difficult and even impossible it is upon denuded teeth which are loose and painful. Incredulous, I always smile when I call to my mind the remembrance of the demonstrations which I saw Younger give; I still seem to hear the eminent practitioner tell us that the removal of the tartar ought to last one hour per tooth in order to be complete. Poor patient! and also, poor dentist! Do not tell me that when an old tooth is really affected with pyorrhœa it is possible to remove the tartar down to the smallest portion. I leave these pretensions to the popes of stomatology; as to myself, not only do I not believe in it, because I have had occasion to extract teeth which were said to have had the tartar completely removed from them, and the roots were still covered with projections of tartar, but I must still more emphasize these facts: subgingival removal of tartar in the first place fatigues the tooth, the arthro-dental gomphosis, and the ligament; furthermore, it means infection of the gum and periosteum; and, finally, it aggravates the evil by spreading it to the neighboring alveoli. I, too, am a partisan for the removal of tartar, and this in a complete manner. But it must be accomplished on certain lines in order not to increase the evil which we desire to cure. I only remove with the instrument the visible or accessible tartar; the remainder I dissolve, not with bi-fluoride of ammonium, the caustic action of which has a grave repercussion upon the periosteal and cementary nutritions, but by means of effluvolysis of a solution of bichromate, for which I have just given you the formula; at the end of four operations—six at the most—the tartar will be gone, as has been evidenced by teeth which have been extracted after this treatment. It is, therefore, necessary for a medicamentous osmosis, by means of an active transport of oxygenous ions into the infectious pockets, to impregnate and penetrate integrally the fatty protoplasm of the bacteria and the diseased epithelious and conjunctive cells. Under the influence of the effluvolysis of this bichromatized solution, strengthened by the action of the ozone, the infectious pockets will soon disappear. The suppuration rapidly dries up; the discolored periosteal tracts, freed from tartar, reassume their elasticity and their suppleness; the looseness disappears; the gums tighten up, reassume their normal color and aspect; Koelliker's band tightens with force round the neck of the tooth, and the latter reassumes its primitive solidity, which only negligence and the absence of daily hygiene will again cause to be lost.

On the other hand, with medicamentous action alone, or by the action of lactic ferments (an exception is made in regard to fluoram), you will only act superficially; you will favor the creation, at the periphery, of microbes or diseased cells, of a coagulated albuminous layer which will quickly become sclerotic and will soon become a powerful barrier against the action of antiseptics. Naturally, after several operations of the application of these medicamentous agents, suppuration diminishes, the gum reattaches itself, the affection retrogresses and seems to enter into a period of decline; but this virtual cure is only illusory, and at the end of a few months recidivation occurs more rapidly and more redoubtable than the first attack. What has happened? Simply this: the microbes, as well as the diseased cells, the periphery of which has become sclerotic under the coagulating action of the antiseptics, have produced in the interior of these sclerotic shells gaseous or liquid fermentations; then these shells disappear in consequence of the nutritive and defensive processes of the alveolus or of the cement under the influence of the osteoblastic diapedesis; the microbes, in some way enchrysalized, awaken; the fermentations and the toxines, which have so long been enclosed, escape by infecting anew the dental arthrosis in a manner much more virulent the longer these fermentations and these toxines may have been enclosed. It will be necessary, therefore, if we employ a purely medicamentous method, to re-act with energy and with antiseptics in order to be sure that we have removed the microbes and destroyed the tissues in which they are localized; and this is an additional reason why the method is bad.

All the same, I will gladly concede to this method of medicamentous treatment some cases of cure in those circumstances in which the general state of the patient or the early period of the affection has augmented the chances of a rapid retrocession; but when we are dealing with chronic pyorrhœa, the lesions in which are deep, medication is certainly insufficient on account of its action, which is essentially and necessarily superficial.

Moreover, numerous recidivations and frequent non-successes are a proof of this. If we extract a tooth which has been unsuccessfully treated, we shall see the diseased gum then rapidly heals after a few antiseptic washings. Why does this rapid cure of the gum occur by the mere fact of the extraction? Because the chief cause is suppressed, the partisans of extraction will tell me. Yes, perhaps so; but it is chiefly because the toxines which were formed, and the offending microbes which no longer find themselves in their elements of existence and of destruction or of

pullulation, are eliminated; and because the diseased cells have ceased to be diseased or are dead and have disappeared.

Well, then, by profound and intimate ionic penetration into these destructive elements (microbes, toxins, or diseased cells), by the ozonization of the living cells, contaminated or healthy, every live condition for bacteria is interdicted, and at the same time we bring health and life to the tissues affected in their cellular protoplasm; we arm anew, in a more powerful manner, these cells, as well as the leucocytes, for the diapedetic defence and the phagocytory struggle.

In conclusion, I have pronounced against the exclusively medicamentous method. It is necessary in our professional schools that practical instruction should come to the front if we desire to avoid the stagnation of odontological science—a stagnation which has dealt so hardly with the medical sciences. And, believe me, our dental schools have not instructed their students sufficiently on the side of electricity. You know what role this mysterious force already plays in our operative arsenal and in prosthesis. You know the marvellous results obtained in difficult extractions, in the evolution of the wisdom teeth, and in orthodontia by radiography, another form of electricity. For more than a year I have explained the results obtained in the treatment of divers affections by electric currents of high frequency, and you are now aware of the numerous services which electricity may yet render; and you may count upon me, who has specialized upon this question, to write shortly in our Bulletin to give some general notions which will facilitate for all the employment of this force, and which will permit you to draw therefrom the maximum of results which our knowledge of to-day enables us to claim from it.

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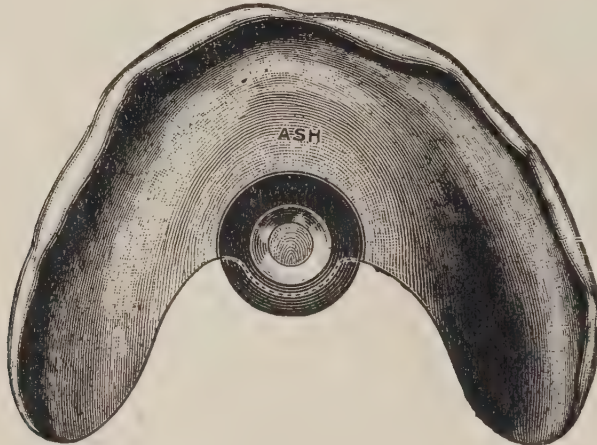
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Rauhe's Improved Suction Disc for Vulcanite Dentures

PATENTED IN ENGLAND, GERMANY, FRANCE, AUSTRIA-HUNGARY,
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Rauhe's Suction Disc has been specially designed to prevent injury to the palate. It does not draw down the tissues and produce soreness in the mouth. In this respect it is greatly superior to all existing Suction Discs.

There are no parts about it which can be lost or misplaced, such as bolts or screws, etc.



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The suction power of the disc is sufficient to hold a denture quite firmly and securely in position.

It is unnecessary to add clasps to partial sets which are fitted with Rauhe's Suction Disc.

DIRECTIONS FOR USE:

Press the disc on the most suitable part of the plaster of Paris model with the thumb, fasten it in position with the three small pins which are supplied with it, being careful to drive the heads right home, and pack the hole in the centre with dental

rubber. After the case is packed and vulcanized, strip off the tin form in which the stud is embedded; the portion in which the pins are driven should be removed first. To facilitate removal, cut through the tin, open it with a pocket knife or suitable tool, and strip it off. Should the edge of the stud be bent in stripping off the tin form, it can readily be straightened with any blunt tool. When the stud is thus cleared of the tin form, slip a rubber disc over it and the Suction Disc is ready for use. To do this, the rubber disc should be held down with the thumb of the left hand and stretched over the stud with the thumb and forefinger of the right hand.

In regard to the position in which the Suction Disc should be set on the plaster of Paris model, it will be obvious that the flattest part of the palate should be chosen. Two Suction Discs should be used on exceptionally high palates and on V-shaped palates—one on each side. In the case of large palates it is desirable to set the Suction Disc as far back as possible.

Sometimes the full power of the Suction Disc is not immediately exercised when it is first put into the mouth, but after it has been worn for some time its action will be perfectly efficient.

SPECIAL.—To remove the collar from beneath the Stud, after the case is vulcanized, insert the point of an excavator in the slit exactly opposite the letter C in the name C. Rauhe and open it out gradually, without levering it up, so as not to injure the stud.

PRICES.

Rauhe's Suction Discs for Vulcanite Work:

Gold Stud with 3 India-Rubber Discs.....	each	\$ 1.00
	per doz.	11.25

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Extra India-Rubber Discs, any size	per doz.	.30
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This Rubber Strip is held in position in the denture by the suction which is produced by the small holes on the curved surface and to the gum by the suction through the larger holes on the surface. The Strip can be removed and cleansed, and replaced in half a minute.

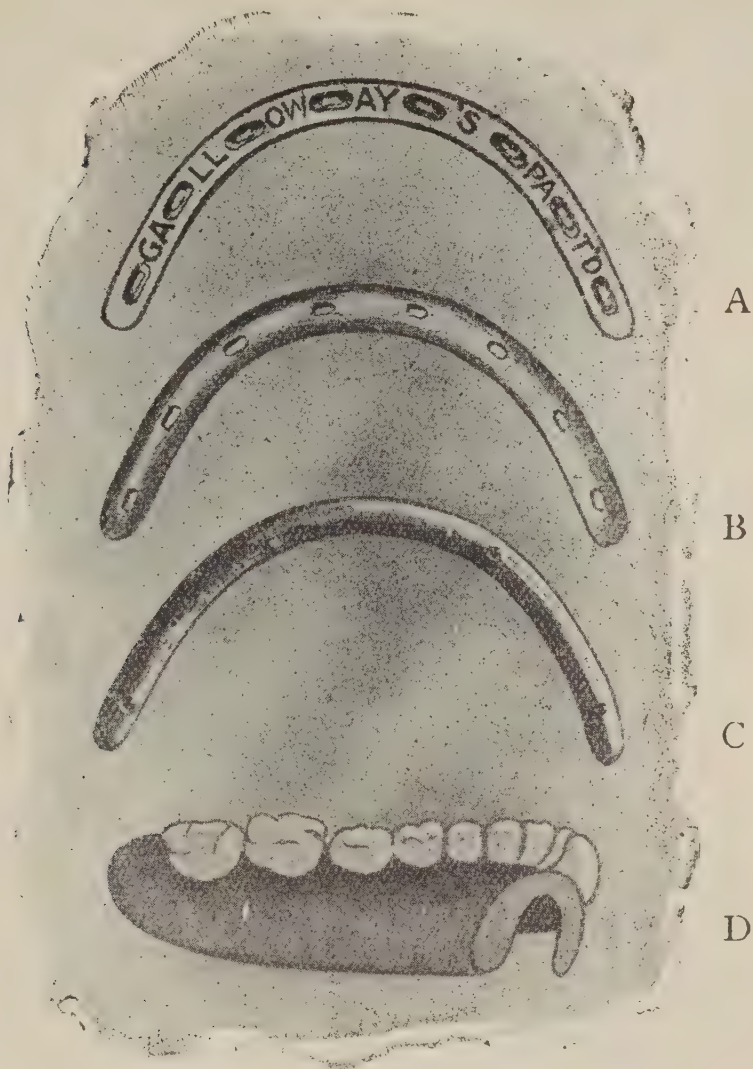
The device is cleanly and secures the denture properly without any discomfort to the patient.

PRICE - - \$1.00

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GALLOWAY'S SUCTION DEVICE FOR LOWER DENTURES ONLY—Continued



Natural size.

A and B show the flat and rounded surfaces of the rubber strip and the holes which serve to retain the denture in position in the mouth.

C—Metal bar with countersunk holes into which the heads of the pins should be firmly pressed.

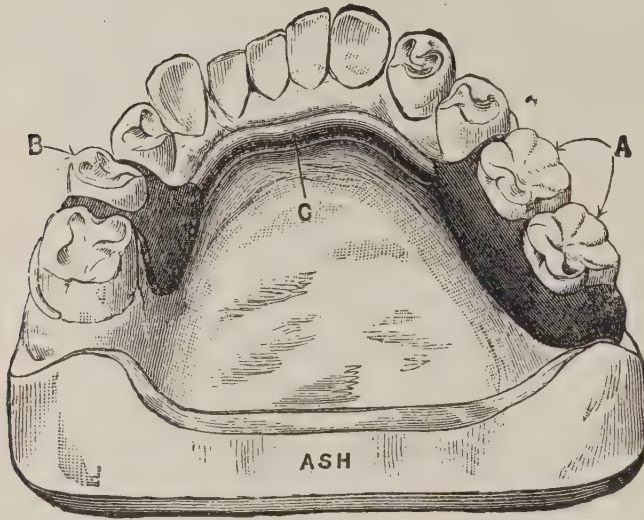
D—Vulcanite blank which shows the rubber strip in position.

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No tendency to push teeth outwards.

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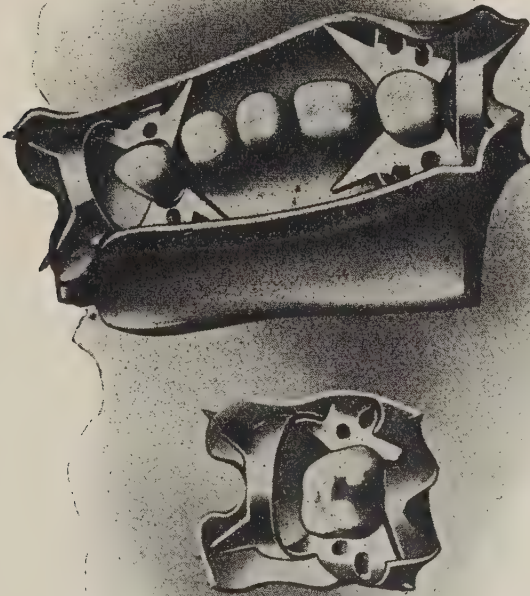
Less bulk.

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The above illustration shows how to effectively Dam one or more teeth with a minimum amount of rubber. You can apply rubber through this simple method to many operations that in the old way are almost prohibitive.

Made of the finest material, in Three sizes :

No. 24 for Molars.

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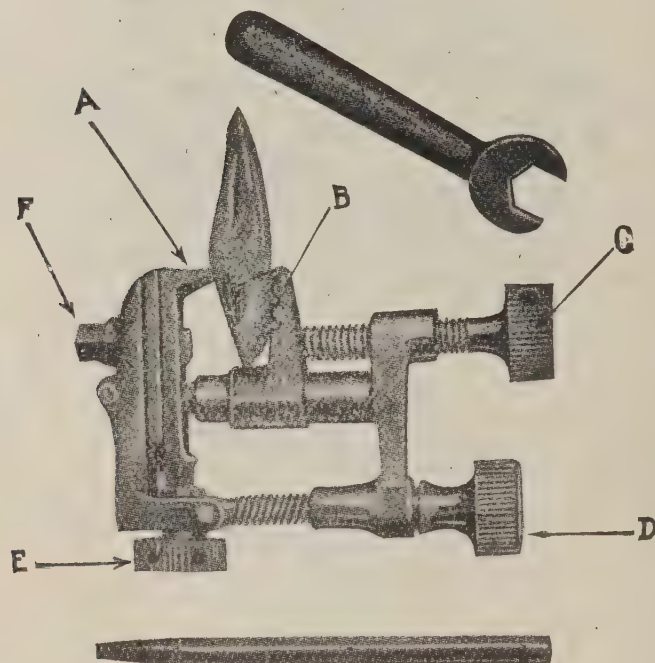
Price each, **65** cents. Per set of three, **\$1.75**.

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Crowns from Roots.

Registered



Natural Size

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A slight turn to the right of Thumb Screw E removes the Crown, one Wedge Tongue pulling the Crown downwards, the remaining two supporting the roof.

- | | |
|--------------------|----------------|
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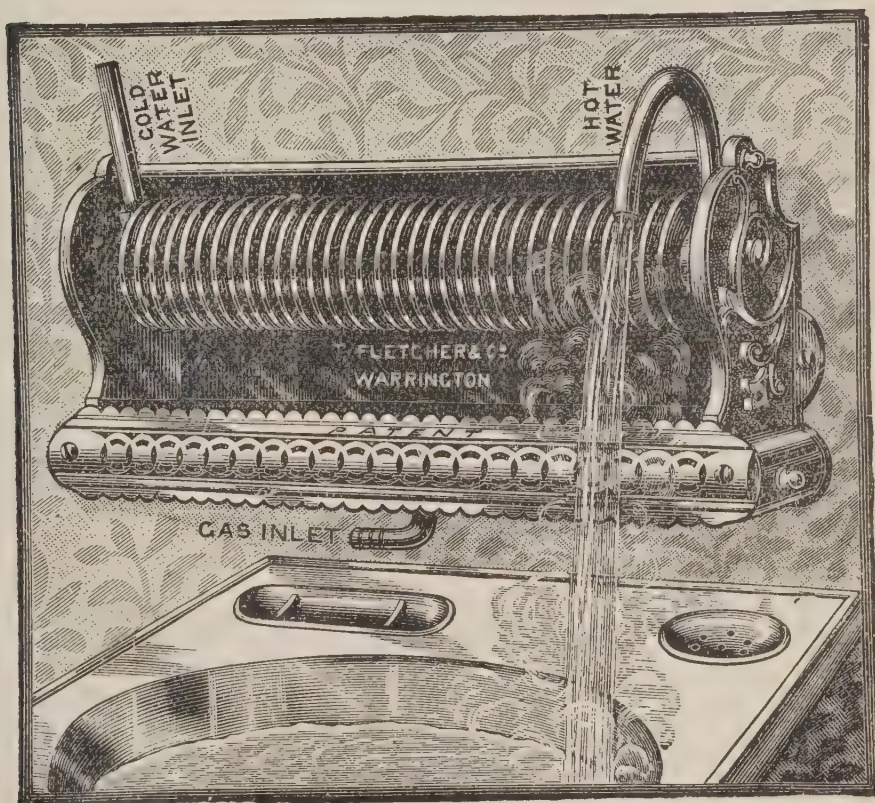
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1 Dozen in a package	\$1.00
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We have a limited number of sample packets. Send us a request postal before the supply is exhausted.

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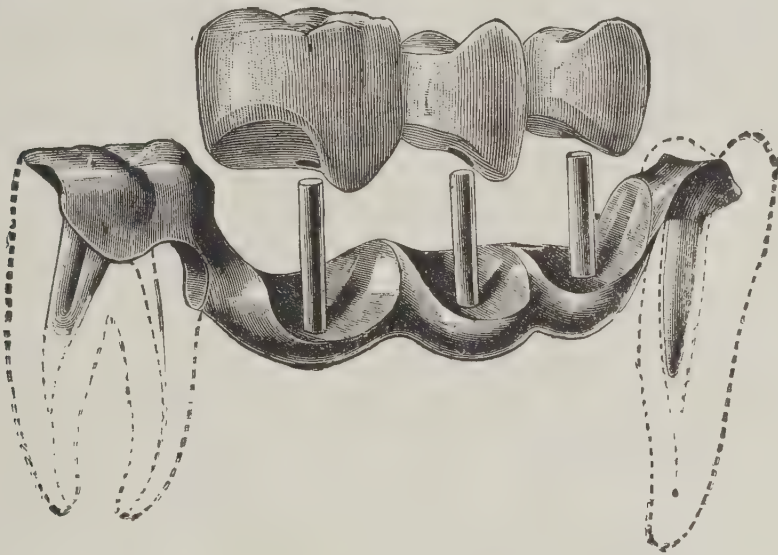
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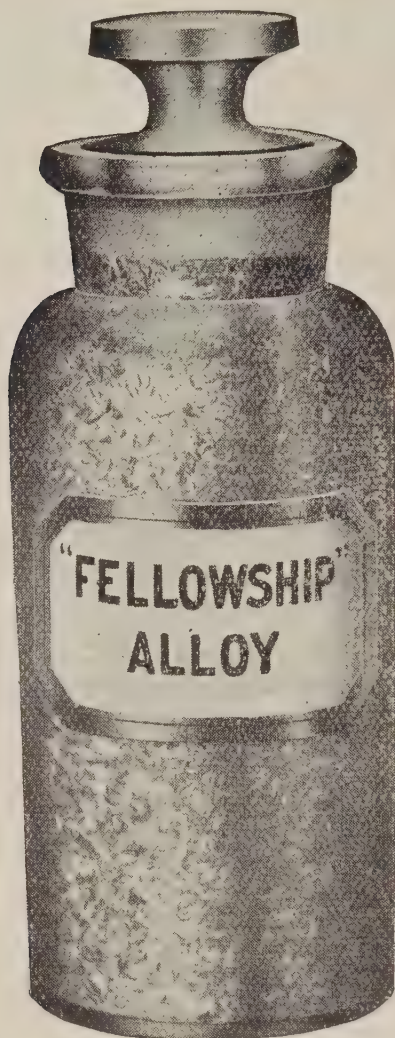
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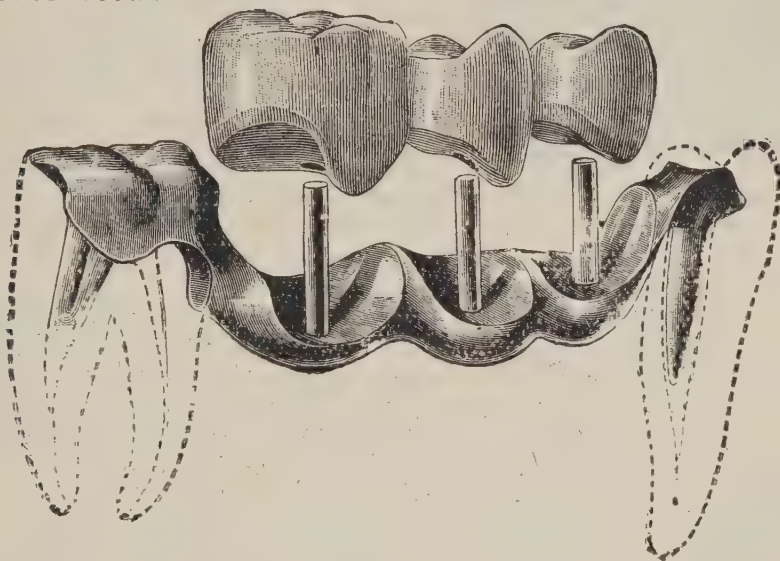
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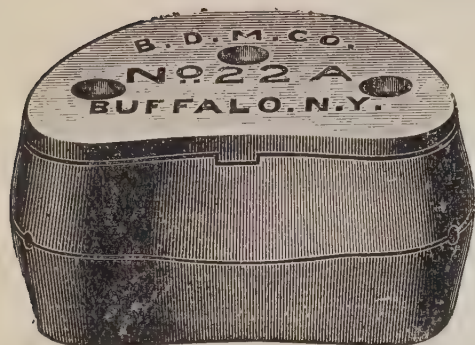
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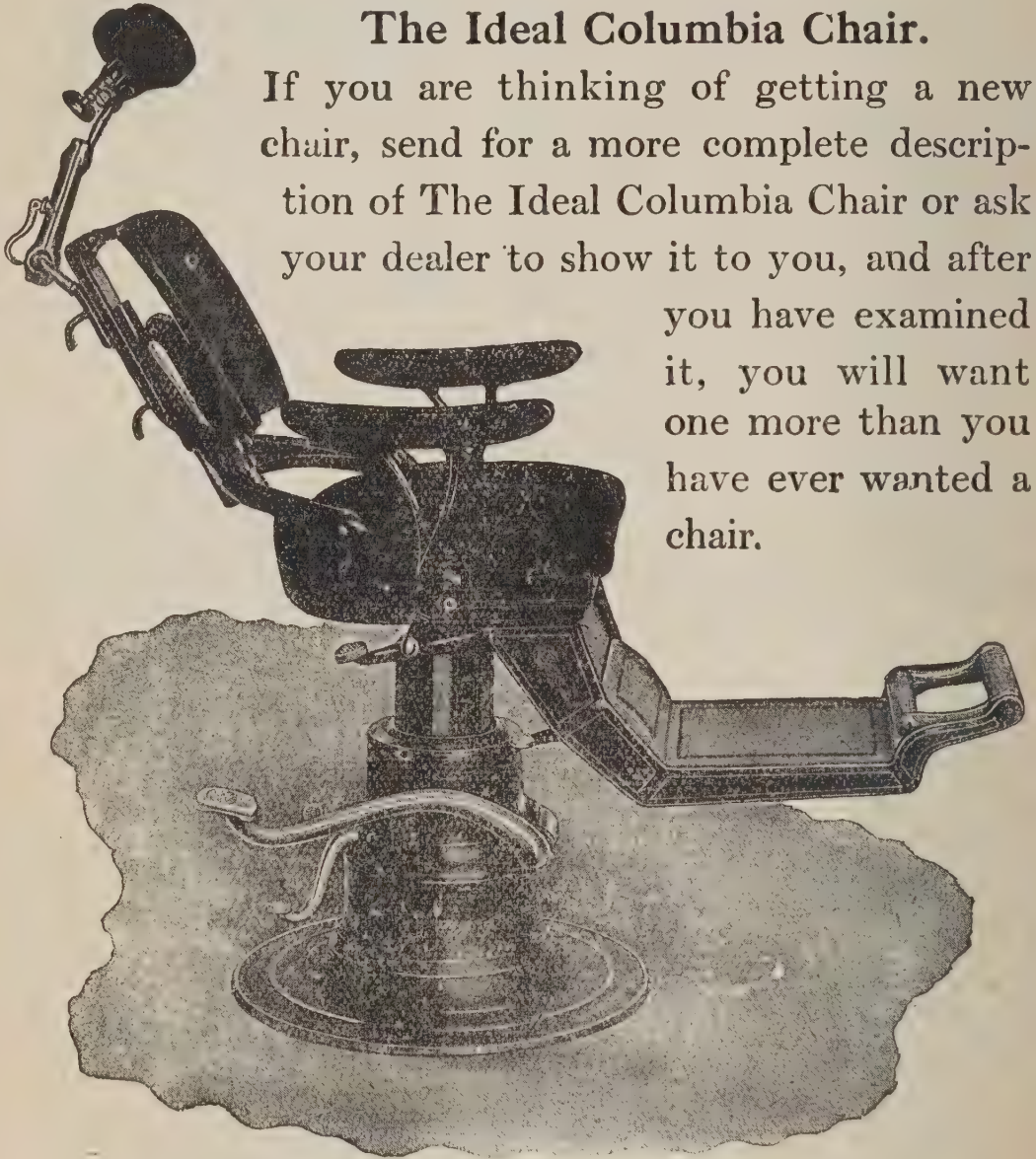
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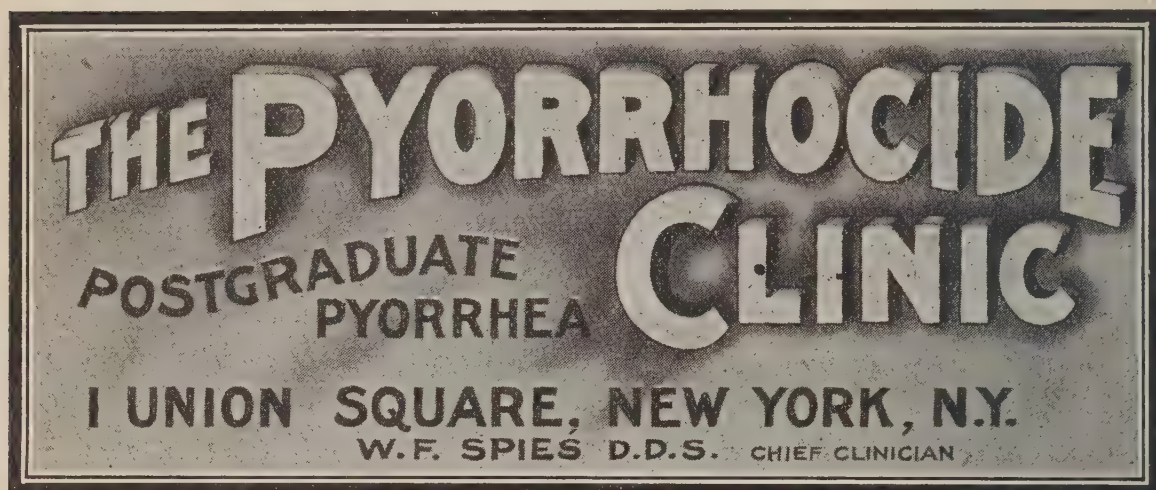
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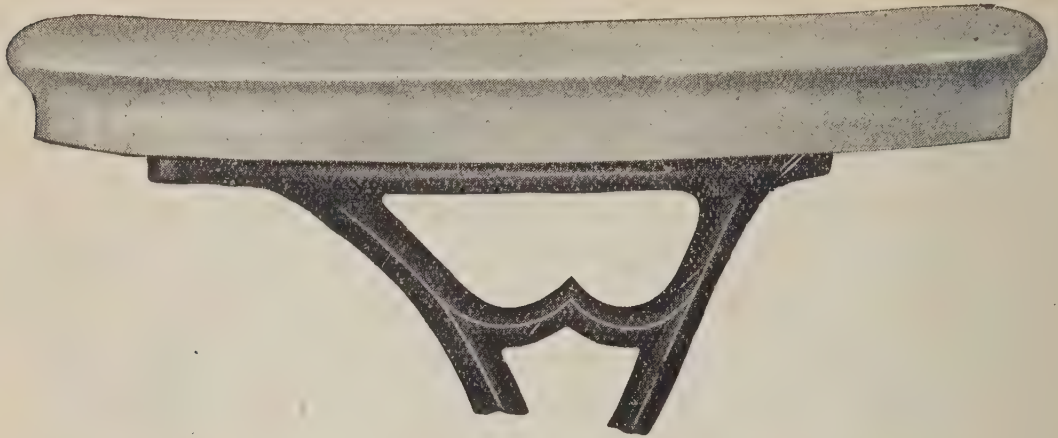
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ASH'S Canadian Monthly Circular

Issued from Toronto on the First of each Month

VOL. II

AUGUST, 1912

No. 11

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Ash's Canadian Monthly Circular

VOL. II.

TORONTO. AUGUST 1, 1912

No. 11

CONSIDERATION OF CASES AND METHODS OF GIVING ANAESTHETICS IN DENTAL SURGERY

By DUDLEY WILMOT BUXTON, M.D., B.S., Lond., M.R.C.P.

There are certain fundamental difficulties in dealing with the routine practice of anaesthesia for dental cases. It is a recognized canon of surgery that risk to life must never be wittingly allowed to rise in operations the performance of which is itself not one of inherent danger, or is not called for to remedy a pathological condition which threatens the patient's life. Uncomplicated dental operations under ordinary conditions neither involve serious danger nor are the lesions they remedy such as involve mortal risk. Again, it is extremely seldom that the patients in a dental clinic exhibit signs of serious illness, and as seldom do they volunteer statements which would warn the casual administrator of an anaesthetic that its use involves unusual risks. It is obvious that it is as inexpedient as it is commonly unnecessary, to alarm a patient about to undergo a comparatively slight operation under an anaesthetic, itself regarded as extremely safe. To say to such an one, "Sir, you are in the presence of potential death," although technically true, would be to do the patient at once a disservice, and to commit a professional blunder.

The matter was very tersely put some years ago by the late Mr. J. Smith-Turner, who, when commenting upon a statement made concerning the dangers of chloroform in dental operations, said: "It is all very fine, but you can't always be dragging a coffin into the operating room." And further, there is a danger of shibboleths disguising truths. In the evidence given at an inquest upon a patient who died when nitrous oxide gas was administered at a general hospital, and who apparently suffered from dyspnoea, the administrator—a medical man—said he had given nitrous oxide because it was "the safest anaesthetic"; and the pathologist remarked, apparently inconsequentially, that the death under so safe

an anaesthetic proved how important it was that a medical man should be the administrator.

There should be no loose description of anaesthetics, as such being labelled "safe" or "dangerous." Their safety or the reverse depends less upon their inherent qualities than upon their suitability for certain patients. It is both scientifically exact and logical to place inhalational anaesthetics in an ascending order of safety; thus, chloroform, bromide of ethyl, chloride of ethyl, ether, nitrous oxide in prolonged administration, nitrous oxide in single administration, nitrous oxide diluted with air or oxygen. In like manner one is justified in tabulating safe "methods" for each anaesthetic, for example, in the case of chloroform we place the douche method of pouring on an open mask at the danger end, and the use of a regulating dosimetric inhaler at the safer end. But these results can only be arrived at by physiological experiment, and hold true only for normally healthy persons of adult age.

Nitrous oxide, if given to a person suffering from respiratory impediment due to inflammation of the structures of the neck about the larynx and trachea (Angina Ludovici) is a deadly anaesthetic, and to use it is to court disaster. The same patient under a scientific administration of chloroform vapour with oxygen would run little risk. In this case chloroform is the "safe," nitrous oxide the "dangerous" anaesthetic. A rule-of-thumb choice of an anaesthetic and a routine system of administering it, are dangers which should not be inflicted upon any patient.

Fashion, which induces one generation of men to wear perukes, and compels girls to parade in hats like inverted flower-pots, intrudes its fascinating tentacles into the domain of anaesthetics, and to its detriment. A new method or a novel analgesic is found to be convincingly useful under certain conditions; it becomes the vogue, and straightway is vaunted as safest and best under all circumstances. The matter is broached in the enterprising half-penny press, usually as a novelty from Germany, and patients urge the employment of the wonderful panacea in their personal interests. Novelty even ensnares the anaesthetist or surgeon, and its freshness and promise of hope induces one to adopt, and the other to ask for, a method, possibly of value, but certainly like all mundane matters, possessing strict limitations as regards its range of safety and utility.

It comes, then, to this, that in routine dental practice safety should stand first, and it is our business to ensure it so far as in us lies. It is obvious that the patients seldom belong to the class of normal healthy persons. It is the sick, and not the whole, who need a physician, and equally so is true of those who seek the dentist. To discriminate between the really sick—and some may be sick unto

death and not themselves know it—and the passably well, needs no small acumen, if we are to exclude the ordinary methods of clinical examination. Yet it can be done with reasonable certainty by those who have trained their eyes to see and their ears to hear. The walk, the breathing, the voice, the colour, the physique, the carriage of the patient as he passes through the doorway and finally settles into the chair, each has a tale to tell. We can note the eyes, the hands which tremble or are steady, to help out the diagnosis.

There are types which everyone who gives anaesthetics must recognize. The syphilitic suggesting degenerate blood vessels; swellings about the neck, pointing to the danger of giving any anaesthetic which causes venous engorgement; the proptosis of Grave's disease; the pallor or blueness of anaemia, or cardiac trouble; the lymphoid hypertrophy associated with impaired circulatory stability—all stare you in the face and cannot be missed.

Another class less easily recognized consists of patients with nerve lesions. With these we have neurasthenics, always on the verge of a collapse. Epileptics, whether from idopathic causes or traumatism, are not so obvious unless some history of fits be given. It is often revealed to us by friends, who commonly say the patient has "syncope" or "faints," and no one should be misled and assume that such attacks are cardiac in origin. The epileptic patient, especially if a victim of petit mal, may not know of his malady, and the first evidence of it may be revealed by his unusual behaviour under the anaesthetic. Epileptics quite commonly pass into a fit as they come under the influence of the anaesthetic. The breathing grows hurried and weak, the muscles twitch and the face grows pallid, the eyeballs become fixed, and the pulse almost disappears. It is a safe rule that whenever respiration is interfered with the anaesthetic should be stopped, and not resumed unless the anaesthetist can assure himself that the phenomenon is due to nervousness or other unimportant cause. The types associated with circulatory enfeeblement range from the old person exhausted by prolonged abstinence from food—a common and grave danger—to the blue, puffy, obese, patient the victim of malassimilation and chronic dyspepsia. I have known of one case of slight cerebral hemorrhage following nitrous oxide; the patient in that instance, however, revealed no sign of degeneracy of tissues.

The difficulties and dangers arising during dental operations become accentuated when a prolonged period of unconsciousness is required. For example, when a mouth is full of diseased roots or a badly impacted tooth called for removal in the old days, chloroform was selected as the anaesthetic par excellence; to-day, for reasons into which I will not enter, chloroform is reserved for the spe-

cialist, and even he seldom uses this anaesthetic in dental cases. That continuous gas is valuable in such cases one must admit, but that it should be used with extreme care is my own conviction, arrived at after employing the method some thousands of times. The older apparatus had obvious defects, and more modern types have removed many of the drawbacks attributed to the method.

Mr. Frank Coleman's apparatus is one of the best and most modern. It permits air being admitted, either continuously with nitrous oxide or to the exclusion of the anaesthetic—a matter of importance, as the sequel explains. The difficulty experienced by some persons when told to breathe in through their nose is met in this apparatus by connecting the oral cap with the gas supply, so that the oral and nasal inhalation go on simultaneously. Continuous gas in dental practice involves the passage of a foreign gas through the pulmonary vessels for a prolonged time. This must impede the blood flow and so increase the work which the heart has to accomplish. When, as must so often happen during extractions, the tongue is forced back and blood and mucous collect about the laryngeal aperture, expiration is hampered. The blood grows and is more deoxygenated, engendering increased venous engorgement, itself a further cause of respiratory difficulty. Even the use of apparatus which admits oxygen with nitrous oxide cannot entirely prevent the onset of an asphyxial element in the case, so that the patient's safety depends solely upon the powers of observation and skill of the administrator in dealing with such complications.

It would be an exaggeration to say these dangers arise in every case; they arise most readily in those in which there is an initial respiratory or circulatory disability, and hence my contention that whoever uses continuous gas must take careful stock of his patient before commencing the administration. Let us follow the course of such a case; the increasing blueness may be overlooked and the respiratory movements, which are difficult to discern in a patient in a dental chair, especially if a female, and when she has slipped a little down, grow feebler and feebler, eventually stopping. This is quite readily overlooked, especially in a poor light, and the operation continues. At this point the patient may be saved by promptly taking her from the chair, placing her supine on the floor, and pulling forward the tongue by Laborde's method, together with the brisk compression of the lower ribs according to the method of Howard. If this is not done, the loss of a few seconds may lead to a fatality. It depends upon whether the heart can recover from the over-distension of the right ventricle. The unpleasant after-effects succinctly grouped as "feeling quite done up" are due more or less to asphyxia. Indeed, if we can exclude the nerve storms of nervous patients, we

may be sure that all such after-effects of "gas," however given, arise through asphyxial complication.

Many persons have used and do employ ether, as, indeed, it was essential they should do so, until the improvements in the use of nitrous oxide rendered its intensive action a possibility for prolonged dental operations. Ether has always suffered through its just reputation for safety. Its use has commonly been its abuse, and undesirable after-effects imputed to its use, which, in fact, resulted from its abuse. (Here the speaker described by means of diagrams the genesis of ether inhalers leading up to the present methods). The modern "open method" of ether giving is wholly distinct from the open-mouthed in use in 1846 and the succeeding years. The enormous quantities used produced an amount of salivation and cooling which are dangerous in prolonged and troublesome in brief cases. To-day we supplement a dropping method, using a metal frame, covered with many folds of fine-meshed gauze, by a preliminary hypodermic injection of atropine. To this often is added either morphine or that drug combined with scopolamine, in order to lessen the quantity of the inhalational anaesthetic. Even so, much ether must be evaporated, a small amount of which enters the patient's air-passages, and much permeates the room in which the operation takes place.

In dental work open ether, if properly managed, gives good results, although the light character of the narcosis may render it difficult, when the mask is removed, to maintain anaesthesia unless subsidiary means are adopted, such as pumping the vapour through an oral tube, or what not. The preliminary use of the alkaloidal bodies named lessens the likelihood of this necessity arising, as they deepen and prolong the anaesthesia. After-effects are infrequent, but the patients commonly sleep for hours after the operation, and this is not at all times desirable, unless there is someone at hand to see that hemorrhage has ceased, and blood is not entering the air-ways or the stomach.

In conclusion, I would say that every case needs individual study: the method adapted to one is unsuited for another. Chloroform still offers immense advantages in the hands of scientific administrators. Continuous gas, while probably the best routine anaesthetic for prolonged dental cases, have very definite limitations and its safety is not the safety which surrounds a single administration of gas and oxygen. Open ether, while of value, has yet to be shown to be superior to a closed method for brief operations. Ethyl chloride and its compounds, to which I have not had time to refer, need great care. The convenience is obvious, the dangers are very real, although less clearly recognized, and the after-effects not easy to prevent or foresee.

INJURY TO THE SOFT TISSUES BY DENTURES*

By R. McKAY, L.R.C.P., M.R.C.S., L.D.S.

When one considers the numbers of ill-fitting dentures which are in use, it is surprising how little serious injury to the soft tissues of the mouth is seen in practice. It is possible that the majority of cases which become malignant pass direct to the general surgeon, but it would seem that the buccal mucous membrane is singularly tolerant of prolonged injury.

Exclusive of the injury sometimes seen with new dentures where the bite has been left hard, two main classes of injury may be considered, viz.:—

(1) Absorption of the alveolar processes with consequent settling of the denture.

(2) Uncleanliness and a general septic condition of the mouth and dentures.

Two cases presented themselves at the hospital last year, which well illustrate these types.

In one, direct injury resulted from the edge of a plate. The plate, an upper one, had been worn for fifteen years; odd natural teeth had been lost since, and absorption of the alveolar processes had taken place, with the result that the edge of the plate—itsself thin and sharp—had cut into the soft tissues of the sulcus over 1 2 3 4. The patient was a female over 70, and had noticed the sore place for two and a half years, but being unable to afford new teeth, she put up with the discomfort as long as she was able. The ulcer was deep and clean cut, and with distinct hardening around. The mouth itself was clean.

The plate was left out, and the patient watched in view of possible malignancy. Marked improvement was seen in two weeks; the induration cleared up, and the ulcer slowly decreased in size, but a narrow, fissure-like condition remained for over three months. This has now disappeared, and the epithelium over the part appears quite normal. All pain ceased with the removal of the denture, but the patient is still being kept under observation on account of her age and the duration of the injury.

*From the Annual Reports of the Royal Dental Hospital of London.

In the other case vulcanite dentures had been worn for fifteen years, day and night. These, although "always cleaned," were filthy, and the mouth generally in a septic condition. The mucous membrane under the dentures was deeply congested, and the pathological report was "Epithelium slightly hypertrophied, otherwise normal without suggestion of new growth." In the left lower and right upper canine regions were large granulating ulcers. The condition cleared up with simple cleanliness and removal of the dentures.

These cases are of interest, since it is the association of long-continued irritation with sepsis which may be the starting point of malignant growths of the jaws. In the gums the growth may start from the edge round a septic tooth and invade the bone, whereas in the hard palate the edge of the plate may start the new growth.

With the absorption of the alveolar process in the mandibular incisor region the inner edge of the denture frequently causes a marked ulceration under the tongue. From a practical point of view it should be remembered that a well-recognized type of carcinoma occurs in this region called "sub-lingual" cancer. In ulceration apparently due to a denture it is well to exclude the possibility of the ulceration being malignant.

The septic condition illustrated by the second case is entirely preventible by simple cleanliness. It occurs in those who keep their dentures in the mouth day and night. Scrupulous cleanliness will not in these cases always prevent irritation. It is more marked when the surfaces in contact with the soft parts are of unpolished vulcanite, but is also seen with neglected metal cases.

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1	Wetherby Suction Machine (new style), in A-1 condition	25 00
1	Ritter Caustic Potash Machine, all cord overhead type, 12 Cells with Rectifier and Voltmeter, practically new.	160 00
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GALLOWAY'S SUCTION DEVICE

FOR LOWER DENTURES ONLY

Patented in United Kingdom and U.S.

Other Patents Pending.

This Suction is the most satisfactory ever offered. It consists of a curved metal bar, which has counter sunk holes in it for four pins to secure it to a plaster model, and a vulcanized strip of Ash's specially prepared Vela Rubber which so well withstands the oral fluids.

This Rubber Strip is held in position in the denture by the suction which is produced by the small holes on the curved surface and to the gum by the suction through the larger holes on the surface. The Strip can be removed and cleansed, and replaced in half a minute.

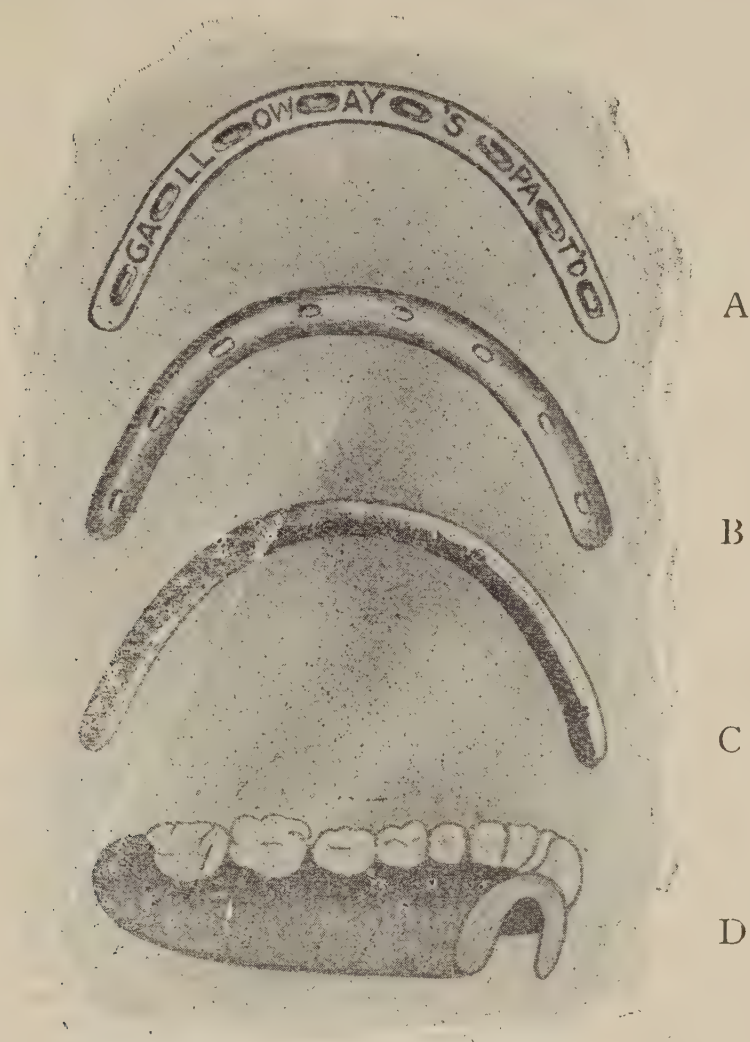
The device is cleanly and secures the denture properly without any discomfort to the patient.

PRICE - - \$1.00

SOLE AGENTS—

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GALLOWAY'S SUCTION DEVICE FOR LOWER DENTURES ONLY—Continued



Natural size.

A and B show the flat and rounded surfaces of the rubber strip and the holes which serve to retain the denture in position in the mouth.

C—Metal bar with countersunk holes into which the heads of the pins should be firmly pressed.

D—Vulcanite blank which shows the rubber strip in position.

PRICE.....\$1.00 each

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Rauhe's Improved Suction Disc for Vulcanite Dentures

PATENTED IN ENGLAND, GERMANY, FRANCE, AUSTRIA-HUNGARY,
BELGIUM, THE UNITED STATES, ETC.

Rauhe's Suction Disc has been specially designed to prevent injury to the palate. It does not draw down the tissues and produce soreness in the mouth. In this respect it is greatly superior to all existing Suction Discs.

There are no parts about it which can be lost or misplaced, such as bolts or screws, etc.



It is easily kept clean, owing to the fact that the rubber disc can be removed and replaced in a few seconds, without the use of a tool of any kind.

The anchorage of the rubber disc is so simple that the patient can renew the disc when necessary.

The suction power of the disc is sufficient to hold a denture quite firmly and securely in position.

It is unnecessary to add clasps to partial sets which are fitted with Rauhe's Suction Disc.

DIRECTIONS FOR USE:

Press the disc on the most suitable part of the plaster of Paris model with the thumb, fasten it in position with the three small pins which are supplied with it, being careful to drive the heads right home, and pack the hole in the centre with dental

rubber. After the case is packed and vulcanized, strip off the tin form in which the stud is embedded; the portion in which the pins are driven should be removed first. To facilitate removal, cut through the tin, open it with a pocket knife or suitable tool, and strip it off. Should the edge of the stud be bent in stripping off the tin form, it can readily be straightened with any blunt tool. When the stud is thus cleared of the tin form, slip a rubber disc over it and the Suction Disc is ready for use. To do this, the rubber disc should be held down with the thumb of the left hand and stretched over the stud with the thumb and forefinger of the right hand.

In regard to the position in which the Suction Disc should be set on the plaster of Paris model, it will be obvious that the flattest part of the palate should be chosen. Two Suction Discs should be used on exceptionally high palates and on V-shaped palates—one on each side. In the case of large palates it is desirable to set the Suction Disc as far back as possible.

Sometimes the full power of the Suction Disc is not immediately exercised when it is first put into the mouth, but after it has been worn for some time its action will be perfectly efficient.

SPECIAL.—To remove the collar from beneath the Stud, after the case is vulcanized, insert the point of an excavator in the slit exactly opposite the letter C in the name C. Rauhe and open it out gradually, without levering it up, so as not to injure the stud.

PRICES.

Rauhe's Suction Discs for Vulcanite Work:

Gold Stud with 3 India-Rubber Discs.....	each	\$ 1.00
	per doz.	11.25

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	per half doz.	2.50

Extra India-Rubber Discs, any size	per doz.	.30
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We want to attract your attention also to our
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We have a fine stock of these and can supply them either PLAIN or MAGNIFYING in the various sizes

A request postal will promptly bring one to you.

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This cut represents THREE aluminum Dentures, cast by ASH & SONS on this machine. It will be noticed that these three dentures are cast through ONE sprue.

This machine is adapted for use for all sizes of work. The quality of metal it turns out has never been equalled in casting.

PRICE, Complete with Furnace and Blow pipe, \$60.00

Ask for Catalogue J.

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CAST WITH THE Solbrig-Platschick Press

As testimony to the superiority of this appliance over other machines on the market to do this work, see the number of appliances left with us for sale by people who have immediately discarded them and purchased a

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Better still, if you are in Toronto, come to our Depot and see it operated.

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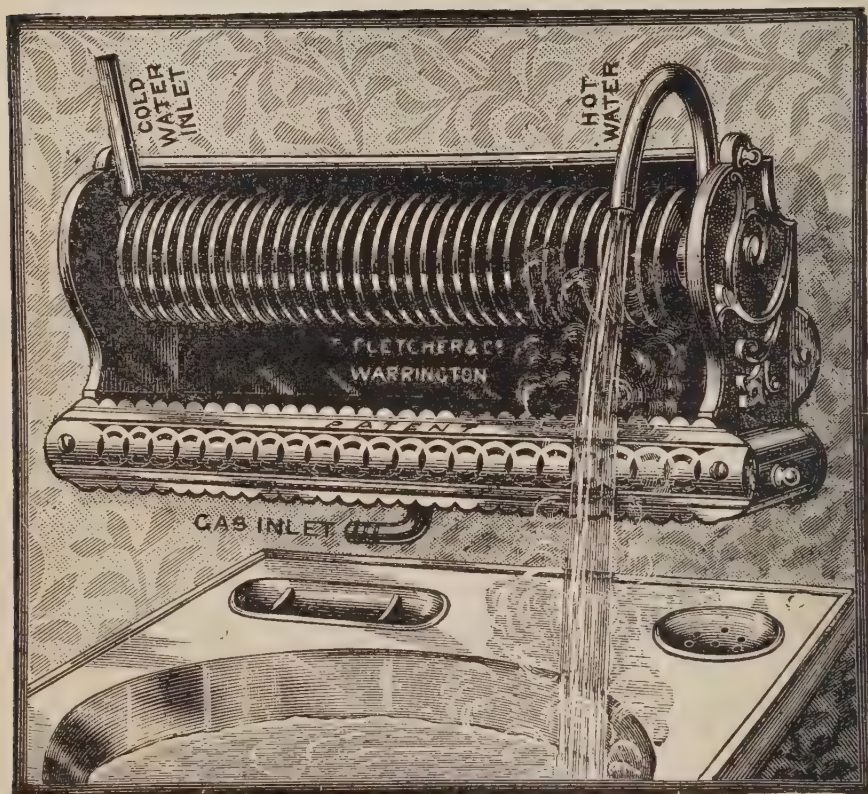
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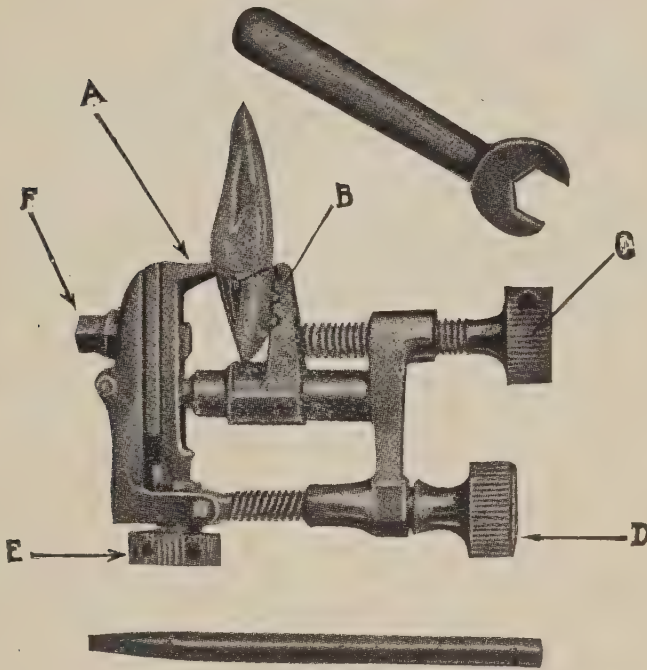
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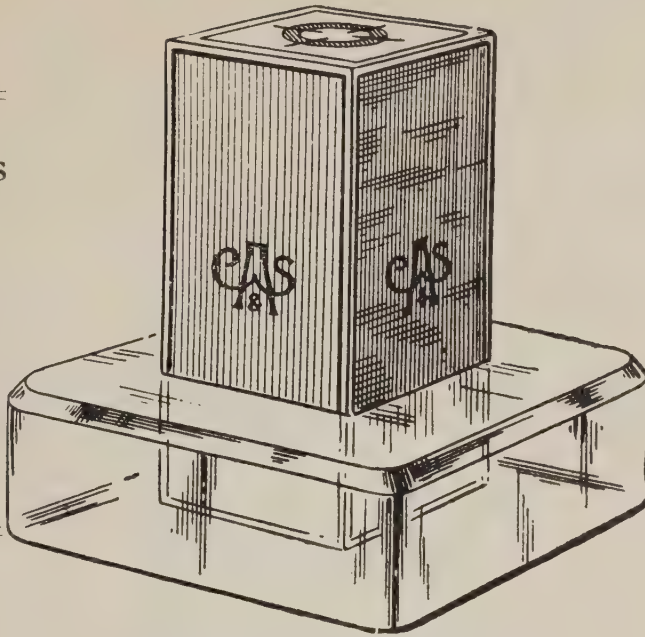
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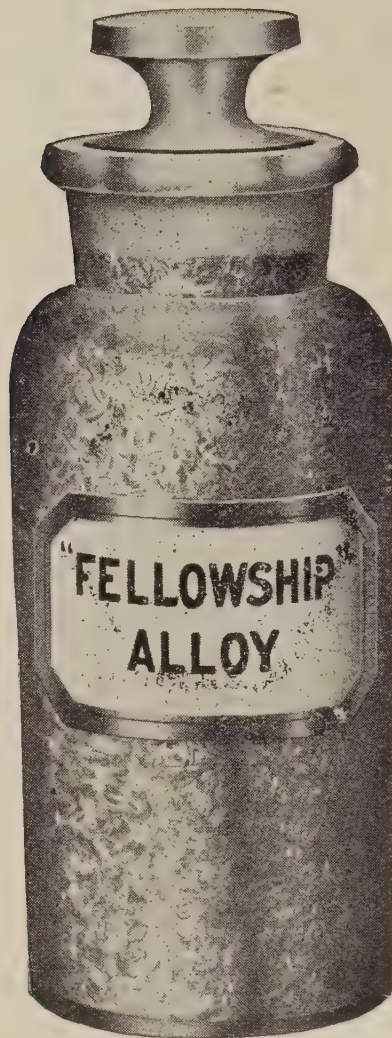
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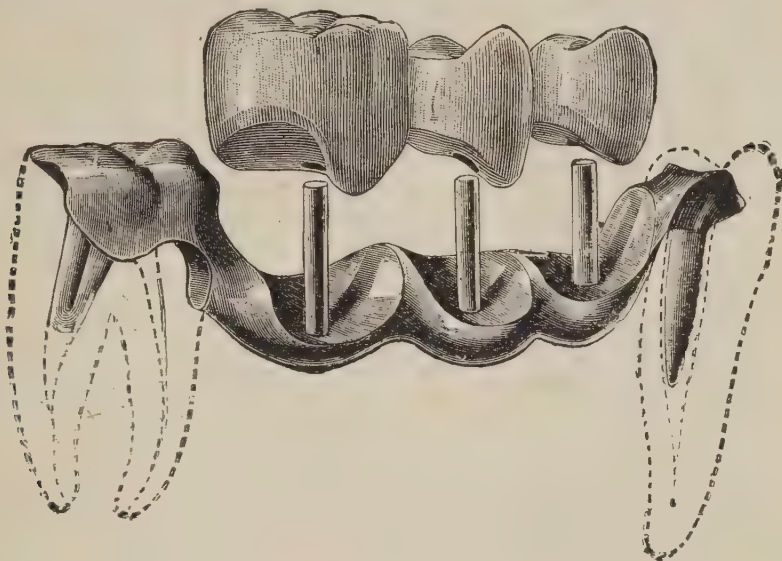
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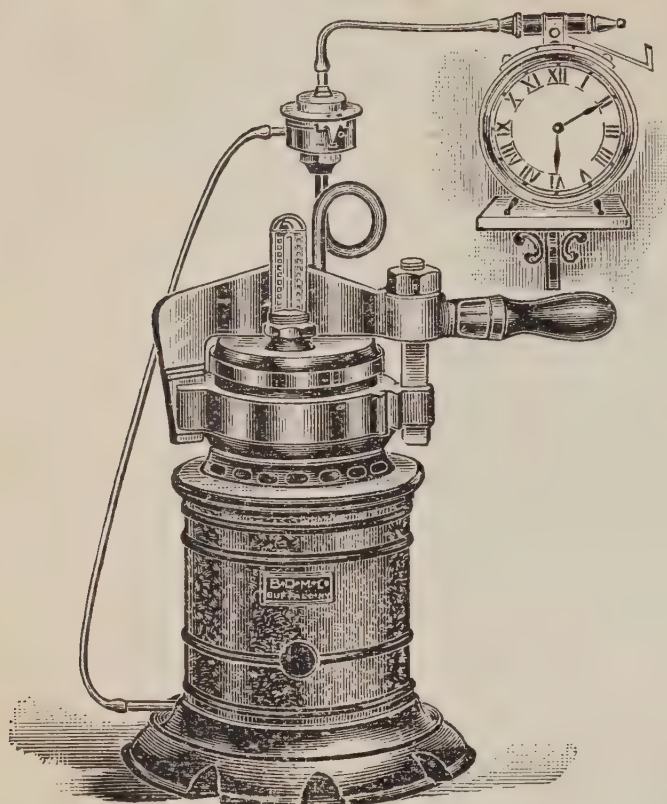
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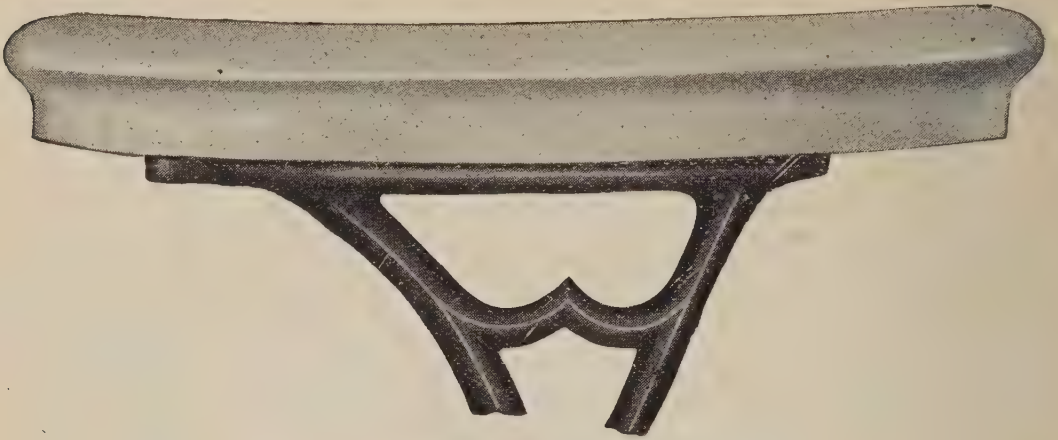
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you and Mr. Germ part company forever; because dirt, dust and grease are easily wiped from the porcelain surface in an instant, and Mr. Germ doesn't bother clean chair arms.

A Pair of Porcelain Enameled Arms Costs \$6.00

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To Clean Teeth use

Carmi-Lustro

(A New Preparation in Dental Prophylaxis)

Why not dismiss your patient delighted with the appearance of their teeth?

Did you ever realize the difference between
**Polishing Teeth, Cleaning Teeth and
Scouring Teeth**

Do you know that when you scour teeth with powdered pumice stone, you destroy the natural luster of the enamel, which was put there by nature to protect the teeth from disease.

CARMI-CLEANER

Which contains **NO** powdered pumice, and will remove stains, leaving a perfectly smooth surface. After cleaning polish and restore the natural luster of the teeth, use

CARMILUSTRO

A dry friction polish, contains no grit whatever, is **applied dry**. By its use the teeth are restored to their natural brilliancy, thus protecting them from disease.

Results are immediate, giving the highest satisfaction to the patient, the polish remains permanently.

Prominent practitioners declare both CARMILUSTRO and CARMICLEANER the best expedients to hold patients, and secure profitable returns.

Advise your patients to avoid harsh dentrifices, as they dull the luster.

After brushing direct them to give their teeth a vigorous rubbing with CARMILUSTRO.

PRICES

Carmi-Lustro (Professional size).....	\$1 25
Carmi-Lustro (Commercial size).....	6 00 per doz.
Carmi-Cleaner (2 1/2 oz. package).....	0 65

FOR SALE BY YOUR DENTAL DEALERS

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Clark New Model Gas Apparatus

The CLARK SYSTEM is a safe, sure, simple and economical method of administering Nitrous Oxide and Oxygen, for analgesia when using the CLARK NEW MODEL GAS APPARATUS. It is not so much the amount of N₂O and Oxygen you give, but the SYSTEM and APPARATUS with which you administer them that determines your success in anaesthesia.

Heretofore, it has been the policy to crowd the gases, under pressure on to the patient, irrespective of his condition and regardless of the excessive waste of N₂O and Oxygen. Confusion resulted, and the complications following, were lack of confidence on the part of both patient and operator, imperfect analgesia and anaesthesia and an unsatisfactory operation.

The CLARK SYSTEM is a complete scientific reversal of the old method. It comprises a well defined and scientific method of inducing analgesia or anaesthesia with a formula compound of a minimum of N₂O and Oxygen and a considerable amount of MENTAL SUGGESTION. With the simple "ONE VALVE" control of the ever dependable mixing chamber, you regulate the flow of the gases in the desired proportion and let the breathing of the patient regulate in a natural way, the amount of N₂O and Oxygen necessary.

WE DON'T FORCE THE GASES—WE DON'T CROWD THE PATIENT

The CLARK NEW MODEL GAS APPARATUS works hand in hand with the CLARK SYSTEM. The new outfit is the result of fifteen years of gas outfit building and the SYSTEM has been the result of our vast experience together with the experiments of a corps of expert anaesthetists who have been daily, for the past months, weighing the possibilities, testing the manipulation, analyzing formulas, experimenting with results obtained by the CLARK APPARATUS until the CLARK SYSTEM has been perfected and developed to a degree where the NEW CLARK SYSTEM with the NEW CLARK GAS APPARATUS has attained a position in the anaesthetic world far in advance of other apparatus, and the methods of induction.

The simple manipulation of the NEW CLARK APPARATUS and the convincing logic of the NEW CLARK SYSTEM are the essence of frankness. There is no concealment, intricacies of mysteries about them. They produce modestly that which you have hoped and longed for, that which you have seen advertised but never heretofore safely or practically realized the greatest boon to the practitioner,—Painless Dentistry.

Does it impress you when we make the assertion that anaesthetists have reduced their N₂O and Oxygen bills from \$100.00 a month to \$10.00 a month, as a result of switching to a CLARK APPARATUS and using the CLARK SYSTEM?

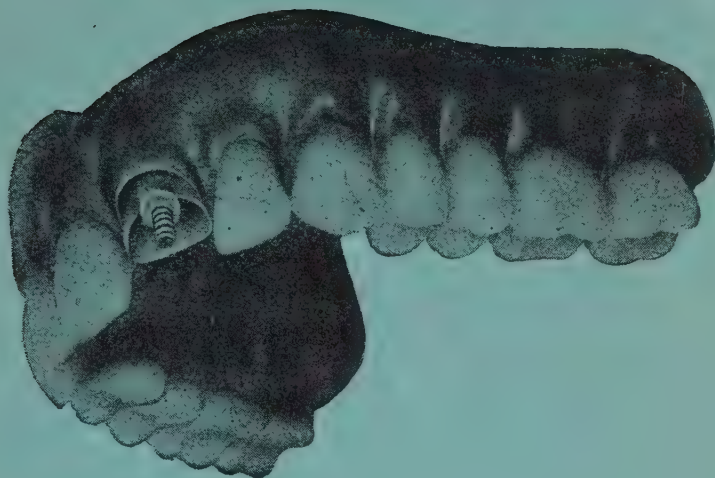
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Goslee Teeth in Vulcanite



The vulcanite plate illustrated above is entirely made of Goslee teeth. The teeth are vulcanized to the pins and plate. For this purpose it is best to pack each hole with CONSOLIDATED NO. 8 OLIVE BLACK RUBBER, and make the plate of same.

PERFECTION PINK rubber is the best veneer to use to secure the most LIFE-LIKE finish.

The great security of attachment thus secured with the Goslee tooth is not only a most important advantage over all other teeth, but in case of breakage it is so easy to replace any tooth and cement it into place.

An attachment of this kind offers much greater resistance to leverage and mastication stresses than teeth with lateral pins. Besides, it eliminates the bulk of vulcanite on the lingual side, which is unnatural, and which always prevents the wearer from articulating plainly.

The Goslee tooth has many other uses, and to keep apace with the "Newer Dentistry" you should be familiar with them.

Send for Booklet B, showing all the Goslee molds.

Send for Booklet C, "The Technique of Using the Goslee Interchangeable Tooth as a Crown, and in all other forms of Bridgework."

Send for chart of Goslee molds, actual size.

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Send for "Ney's Gold Book."

THE J. M. NEY COMPANY

HARTFORD, CONN., U.S.A.

Vol. 11.

TORONTO, SEPTEMBER 1, 1912

No. 12

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